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ABSTRACT

Project CATCH assessed differences in high school performance and retention among students who applied to vocational high schools and were denied admission, those who applied and were accepted, and those who had not applied. Data were collected from 2,700 intermediate/junior high school students. Students completed a Survey of Choices--perceptions of the application process, attitudes toward starting high school, and area of occupational interest. School records were examined and yielded three matched groups of students--Targets (denied admission), Vocational Controls (admitted), and Academic Controls. High school records of retention, inter-school transfer, subject grades, attendance, and punctuality were compared. At the end of 3 years, students who had left school completed the Job Training Survey; retained students completed a Career Choice Survey. Major findings were that (1) the Survey of Choices showed significant differences; (2) Targets had a high, early dropout rate; (3) on measures of grade point average, pass/taken ratio, and attendance, the Vocational Controls were consistently highest, Targets second, and Academic Controls lowest; (4) Targets' and Academic Controls' occupational training in academic high schools were associated with better retention and higher grade point averages; and (5) at entrance into high school, 95% expressed interest in occupational training. (Instruments are appended.) (YLB)

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ED219563

CAREER TRAINING CHOICE

Project C A T C H

A Follow-up Study of Students

Denied Admission to Vocational High Schools

Office of Occupational and Career Education
Board of Education of the City of New York
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FOREWORD

The purpose of Project CATCH was to assess the difference in high school performance and retention between students who applied to vocational high schools and were denied admission, those who applied to vocational high schools and were accepted, and those who had not applied. It began with the collection of data on 2,700 intermediate/junior high school (IS/JHS) students in their last years of attendance who, in June of 1976, had applied to a New York City high school for either ninth or tenth grade September admission. The students completed a survey of their perceptions of the high school application process, their attitudes toward starting high school and their area of occupational interest. Following this, IS/JHS records of the respondents were examined, and yielded three matched groups of students for intensive follow-up. The so-called Targets had been denied admission to vocational high school; the Vocational Controls had been admitted and were planning to attend; the Academic Controls had never applied to vocational high school. High school records of retention, inter-school transfer, subject grades, attendance and punctuality were collected for five high school semesters. They were used to compare the performance of the three groups of subjects while controlling for performance in intermediate/junior high school. In addition, at the end of the third year two surveys were conducted. Students who had left the New York City high school were sent the "Job Training Survey" to determine what occupational training, if any, they had received since dropping out and what their other educational and work activities had been. Students who were retained were sent a Career Choice Survey which included the "Attitude Scale" of Crites' Career Maturity Inventory, (McGraw Hill, 1973), and questions on occupational training received while in high school and on plans after graduation. Finally a profile of the dropouts was examined as the final activity in this study.

The major findings of Project CATCH were:

- The Intermediate/Junior High School Survey of Choices showed significant differences in perception of the application process and feelings about starting high school among the three groups of students.

- The Targets (those denied admission) had a high, early dropout rate. In the first semester, 18 percent of the Targets and none of the Vocational Controls dropped out. At the end of five semesters, only 58.5 percent of the Targets, 68.7 percent of the Academic Controls and 73.7 percent of the Vocational Controls were retained in New York City high schools.

- On measures of grade point average, pass/taken ratios and attendance, the Vocational Controls were consistently highest, the Targets second, and the Academic Controls lowest.

- When the students in academic high schools - the Targets and Academic Controls - received any occupational training, this was associated with better retention and higher grade point averages.

- At the time the subjects were about to graduate from Intermediate/Junior High School, 95 percent expressed an interest in receiving occupational training while in high school. Surveys of both retained students and dropouts showed that virtually the only source of training was that available within the regular high school program.

The project was conducted according to the specifications of a research design developed by Dr. Deborah Perlmutter of the Office of Career Education, Board of Education, City of New York. Dr. Perlmutter was assisted in data acquisition, recording, posting and the

preparation of interim reports by a support staff consisting of Nilda Sierra, Sara DiMaria, Bessie Jones, Judy Schwartz, and David Goldstein. Professional assistance with analysis and programming was provided by Stuart Baden and Sam Ryan of Baruch College, City University of New York. Assistance with the development and the initiation of Project CATCH was provided by Daisy Shaw, Director of the Bureau of Vocational and Educational Guidance and particularly from George Quarles, the Director of the Office of Career Education.

Management assistance and technical support were provided by Dr. Fred Banes and Mrs. Vera Hannenburg of the Office of Career Education staff.

Assistance in the conceptualization of this study was provided in 1975-76 by the late G. Geraldine Dickson, Associate in the Bureau of Occupational Education Research of the State Education Department, and as the project developed, by Dr. Alan Robertson, Chief of that Bureau.

Funds for support of the project were provided by three subsequent Vocational Education Act research grants administered by the Office of Occupational and Continuing Education of the New York State Education Department, 78-3A-729, 79-3A-901, and CO-79-3A-1024.

NEED FOR THE STUDY

The Research Problem

The impetus for this research was the consistently high number of applicants denied both screened and unscreened* vocational courses. For September 1974 admission 7,202 out of 18,946 tested applicants were rejected and 7,914 students were denied admission to oversubscribed unscreened courses. For September 1975 admission 7,997 out of 21,400 tested applicants were rejected and 5,713 students were denied admission to oversubscribed unscreened courses. These figures are for the two years immediately preceeding the initiation of Project CATCH. For September 1976, the figures continued to climb. Despite a record total high school opening enrollment of 51,318 (3,909 over September 1975) 9,908 out of 24,118 tested applicants were denied admission to a vocational high school.

A basic question emerged about these students. Did this denial of their choice affect high school performance? It was hypothesized that they would perform less well in high school - as measured by grades, attendance, punctuality and retention - than students who had been allowed their choice.

The basic question may be examined through subsets of questions at three different points: the effect on perceptions of the high school admission process, the effect on performance while in high school, and the effect on post-high school plans.

1. Questions Related to the Effect on Student Perceptions of High School Admissions

   a. How does denial of admission to a vocational high school affect perception of and satisfaction with the high school application process?

   b. How does denial of admission to a vocational high school affect feelings about and attitudes toward starting high school and starting a particular high school?

*"Screened" courses refer to vocational-technical high schools or courses which require entrance examinations. A separate application is required. Trade and technical courses not requiring entrance examinations are "unscreened".

2. Questions Related to the Effect on High School Performance

a. Is there a difference in the retention rate of those denied admission, those admitted, and those who never sought admission?

b. Is there a difference in the high school performance of those denied admission, those admitted, and those who never sought admission?

c. Is there a difference in the time periods during their high school study, for each of the three student groups above, when their high school performance is at a maximum level?

d. Is there a different "low point" for each group?

e. Is there a different high and/or low time period for attrition between those denied admission, those not denied admission, and those who never sought admission?

f. How many subjects not admitted to vocational high schools received occupational training in the area of occupational interest expressed in junior high school?

g. Does receiving this occupational training affect retention and/or high school performance?

3. Questions Related to the Effect on Post-High School Plans

a. What is the relationship between the post-high school occupational training of dropouts and the area of occupational interest expressed in junior high school?

b. What is the relationship between the post-high school work activities of dropouts and the areas of occupational interest expressed in junior high or intermediate school?

c. What is the maturity of career decision making towards the end of the high school career for the subjects in the three original groups - those denied admission to vocational high schools, those admitted and those who never sought admission?

METHODOLOGY

Definitions:

Before describing the research methodology used to collect and analyze data in answering the previous research questions, it may be helpful to the reader to review the definitions of the different terminologies used in this study.

Subjects:

Target (T)	A student who applied to one or more vocational high schools, had been denied admission, and was not admitted to any other special program or specialized high school.
Academic Control (A)	A student, matched to a particular Target, as stated in subject selection, who applied only for his zoned academic/comprehensive high school.

Vocational Control (V)	A student matched to a particular Target as stated in subject selection, who was accepted into, and attended, a vocational high school.
Triplet	A matched T, A, and V.

High School Retention:

Retention Rate	A student who remained on register in any New York City public high school is counted as retained. Retention rate is the ratio of students retained to those who started.
Attrition Rate	The ratio of those not retained to those who started.
Dropout	A student who entered a New York City public high school and left for any reason other than graduation or movement to another New York City public high school.

High School Performance:

Grade Point Average (GPA)	The mean of all end-semester class grades except for grades in Title I remedial reading and mathematics classes and physical education. In schools on cycles (two grades entered on permanent record for each semester) the mean of all such grades as above is computed by semester.
Pass/Taken Ratio (PTR)	A ratio of classes passed to classes attempted. Passing grade used is 65 percent. Computation includes the identical class grades outlined under GPA.
Attendance	The number of days a student is listed as officially absent from school on the school's records.
Punctuality	The number of days a subject is listed as officially late to school on a school's records.

Selection of Students for the Study

In New York City, subjects enter high school from the eighth grade of intermediate school and the ninth grade of junior high school. Both intermediate and junior high schools (IS/JHS) were therefore included. The major objective in choosing particular intermediate and junior high schools for inclusion was to achieve a sample, representative of the city as to geography, ethnicity, and socio-economic level.

Within each IS/JHS, all candidates for graduation (seniors) present on a given day in May or June (after they were notified as to which high school they would attend) were surveyed as to perceptions of the high school application process, attitudes toward starting high school, and areas of occupational training interest.

For each of the 2,700 IS/JHS seniors responding, a two-pronged data collection was undertaken: a school application history was established as well as a profile of eighth and ninth grade achievement.

The profile of the IS/JHS senior year's achievement included:

- o Reading score on the 3/76 Metropolitan Achievement Test (MAT) Battery
- o Subject grades in English, mathematics, social studies, science
- o IS/JHS program to which assigned (e.g. mainstream, special progress, bilingual)
- o Level of mathematics class (e.g. pre-algebra, two-term algebra, three-term algebra)
- o Number of days absent
- o Number of days late

From this data collection, complete records on 2,437 students were assembled. The balance included students who had been discharged before the close of school, students who had failed to graduate, students whose records were missing and obviously "false" names.

The students selected for intensive follow-up emerged from this group of 2,437. A Target student was identified as a student who had applied to a vocational high school, and had been denied admission, and was also not admitted to any other special program or specialized high school. All who qualified were selected for the study.

Using the IS/JHS application and achievement data, two matching students were chosen for each "Target" student. A Vocational Control was defined as a student who was admitted to, and was attending, a vocational high school. An Academic Control was defined as a student who had applied only to his zoned academic/comprehensive high school. From this procedure 99 triplets emerged, 53 entering 10th grade and 46 entering 9th grade.

Sex was not a matching criterion. The following distributions may be noted. Forty-three Targets are female, 56 male. Of the 297 subjects, 141 are female. Of the 99 triplets, 78 are composed of members of both sexes.

Matching Criteria

1. Feeder intermediate/junior high school
2. IS/JHS program to which assigned
3. Level of mathematics class to which assigned
4. Reading score on MAT

For example, triplet number 1 might be composed of: T-1 who attended JHS-A, was in ninth grade of a two-year Special Progress Program (SP)*, was in the two-term algebra program, and had a reading score of 11.1 on the 3/76 MAT. A-1 also attended JHS-A, was in the ninth grade of a two-year SP, was in the two-term algebra program and had a reading score of 11.2. V-1 also attended JHS-A in the ninth grade of a two-year SP, was in the two-term algebra program and had a reading score of 11.0.

*A program for academically gifted students which compresses grades 7, 8, and 9 into 2 years of study.

Data Collection and Instruments

Intermediate/Junior High School Survey of Choices

Data collection began in the intermediate/junior high school with the IS/JHS Survey of Choices designed to yield student responses in four major areas.

- Perception of the high school application process - Where did they feel they received help? Who did they feel helped them? Did they feel satisfied with their information?
- Attitudes toward school - How did they feel about starting high school? How did they feel about the particular school they were scheduled to attend? How much education did they want?
- Desire for occupational training while in high school - Did they want to be prepared for a job while in high school? To what extent were they aware of the N.Y.C. secondary level occupational training programs being offered?
- Accuracy of memory of their own applications and responses - Did they remember the kind of schools and programs they had applied to? Did they remember the results of these applications? Did they know the school they would be attending?

The survey form itself (see Appendix A: Intermediate/Junior High School Survey of Choices) was developed after a survey of the literature in the field and after interviewing counselors and supervisors of guidance as to current practices in high school articulation (see Appendix B: Questions for District Supervisors of Guidance and Counselors).

The survey was administered to the candidates for graduation present on a given normal school day. Prior to this, workshops were held with the administering teachers, and uniform directions were distributed and discussed. (See Appendix C: Intermediate/Junior High School Survey Instructions).

Application History

A form (see Appendix D: Intermediate/Junior High School Data Collection Instrument) was designed to collect the names of schools and programs to which the IS/JHS seniors had applied and the results of their applications. The instrument also yielded the name of the high school to which the student had been assigned as indicated on an "Admissions List Notice" sent to the IS/JHS.

Intermediate/Junior High School Performance

The same IS/JHS Data Collection Instrument was used to collect the following items for each of the more than 2,700 subjects surveyed.

- Latest standardized reading test score and date
- Latest standardized mathematics test score and date
- End-of-year grades in English, social studies, science, and mathematics
- Level of mathematics class to which assigned (e.g., pre-algebra, honors, etc.)

- Special program designation (e.g., bilingual, accelerated program, mainstream, etc.)
- Number of days absent
- Number of days late
- Home address

The data were collected personally by the researcher and two clerks from each student's records in his or her "sending" intermediate or junior high school. This generally required a search of three different types of records in a particular school: the lists of applications sent; individual records of grades; and duplicates of the list notices sent to receiving high schools. Records were completed for 2,437 of the original 2,700 students surveyed.

High School Performance

Data were collected each semester for the 297 students (99 Triplets) selected for intensive follow-up. Instruments (see Appendix E: High School Data Collection Instruments) were designed to collect the following:

- Subjects taken
- End-semester grades
- Number of days absent
- Number of days late
- Occupational courses taken in other than vocational high schools
- Address change
- Official class
- Movement out of the New York City public high schools including date of discharge and official reason

From these raw data the needed Grade Point Averages and Pass/Taken Ratios were computed.

These data were collected by the researcher and two assistants at the high schools attended by the subjects. Permission to do this was granted by the executive director of the high schools. When a subject moved from one school to another, he or she was followed up. The students, who originally came from 10 junior and intermediate schools in June 1976, were pupils at more than 80 high schools by Spring 1979. Data were collected for five semesters of high school work.

Career Choice Survey

The Career Choice Survey (see Appendix G: Career Choice Survey) was mailed (with a follow-up to nonrespondents) to all students who had not dropped out of high school as of Spring 1979. It included "The Attitude Scale" of the Career Maturity Inventory* (CMI) as well as two questions on occupational training received in high school and questions on plans after high school.

*Career Maturity Inventory, John Crites. Kent State University, Ohio, 1973 CTB/McGraw-Hill, DelMonte Research Park, Monterey, California. Dr. Crites was kind enough to waive the copyright and to extend permission to rewrite the "Attitude Scale" so that it would be suitable for a mailed format.

Job Training Survey

The Job Training Survey (see Appendix H: Job Training Survey) was designed to find out what occupational training, if any, the dropouts had received since leaving school, what their other educational activities had been, whether they were or had been working, and if any of these activities were related to the area of occupational interest expressed in the IS/JHS Survey of Choices.

THE STUDENTS AND SCHOOLS

Characteristics of the Participating Intermediate/Junior High Schools

Ten intermediate/junior high schools were selected as representative: three were in Brooklyn, three in Manhattan, three in Queens and one in Staten Island. The schools were located in seven Community School Districts. Six of the schools were junior high schools, four were intermediate schools. (The Bronx does not appear in the sample by intent, in view of the fact that needs related to this borough were the focus of another special and intensive research study.)

Table 1, Profile of Intermediate/Junior High Schools Surveyed, details, for various descriptive criteria, the means of the grades surveyed city-wide, the comparable grand means for the population surveyed, and the individual IS/JHS means. For example, the city-wide percentage of the IS/JHS senior population was 39.1 percent Black, 23.9 percent Puerto Rican, and 30.1 percent Other. In the total population of the schools surveyed, 39.9 percent were Black, 23.5 percent Puerto Rican, and 30.7 percent Other. The population in the individual intermediate/junior high schools surveyed ranged from 12.0 percent to 80.7 percent Black, from 1.1 percent to 52.9 percent Puerto Rican, and from 0.2 percent to 84.8 percent Other. Thus Table 1 indicates the degree to which the schools participating were representative of the City using data from School Profiles 1976-77, New York City Board of Education. Data on the table are in sets denoting racial composition, attendance and mobility, economic disadvantagement, achievement test scores and class size.

Profile of Students Selected for Follow-up

In June 1976, all IS/JHS seniors in the ten selected schools were administered the Intermediate/Junior School Survey of Choices (see Appendix A: Intermediate/Junior High School Survey of Choices.) More than 2,700 students responded. In September 1976, a case-by-case data collection was undertaken for each of these students. Records at the IS/JHS were searched to complete an application history and a profile of IS/JHS achievement. Each application history included the names of high schools to which each student had applied, the results of any applications and the name of the high school to which each had been assigned. The profile of achievement included standardized reading test scores, final grades in mathematics, English, social studies and science, the program to which the student was assigned, the level of mathematics class to which the student was assigned, the number of days absent for the year and the number of days late. (See Appendix D: IS/JHS Data Collection Instrument.)

The subjects for intensive follow-up were divided into three groups, as defined on p. 3.

Table 1

Profile of Intermediate/Junior High Schools Surveyed*

Descriptive Items	City-Wide IS/JHS Level	Means of Grades Surveyed	Grades Surveyed by Individual Schools									
			JHSA	JHSB	JHSC	JHSD	JHSE	JHSF	ISG	ISH	ISJ	ISK
Ethnic Origin												
% Black	39.1	39.9	17.1	22.1	80.7	12.0	17.6	68.9	42.1	77.0	39.0	23.3
% Am. Indian	.1	.2	0.0	0.0	0.0	0.0	0.0	0.0	.6	0.0	0.0	0.9
% Oriental	2.2	3.2	.3	16.2	.8	.9	7.6	0.0	2.3	0.0	.6	2.0
% Puerto Rican	23.9	23.5	22.0	52.9	15.3	1.1	1.2	14.9	19.8	20.9	10.7	14.0
% Other Span.	4.7	3.8	57.6	.2	.8	1.3	4.2	2.7	15.0	2.0	1.8	2.8
% Other	30.1	30.7	3.0	8.6	2.5	84.8	69.4	13.5	20.2	.2	47.9	57.1
% Attendance (% Ave. Daily Reg.)	81.5	81.1	81.4	82.3	78.7	82.6	85.4	77.4	78.6	79.6	79.9	84.4
% Admissions	18.5	17.7	22.3	13.2	26.3	10.5	10.9	15.4	16.7	18.6	21.7	21.3
% Departures	21.1	18.5	18.6	14.1	37.5	13.2	13.9	18.0	10.8	20.0	21.5	17.0
% Promotions	90.6	85.9	92.8	82.4	82.9	87.3	93.0	90.1	93.5	89.6	88.4	90.7
% Free Lunch Elig.	56.7	51.9	51.9	64.9	50.6	29.4	26.8	77.0	51.1	71.2	27.9	67.9
Total N - 8th	75,087	1884							520	460	505	399
9th	35,782	2307	304	408	399	468	432	296				
Mean Rdg. 8th Grade (IS)	7.7	8.1							8.3	7.0	8.2	8.9
Total Test 9th Grade (JHS)	8.9	8.6	7.3	8.1	7.5	10.1	11.0	7.4				
Av. Class Size	30.0	31.4	30.4	30.4	30.7	33.4	33.2	32.9	30.6	32.9	29.7	30.7

* All data from School Profiles 1975-1976, New York City Board of Education

Analyses reported in the "Findings" section of this study were on two subpopulations: the triplets remaining intact as a group of threes, and "all students retained" a population as T's, V's and A's who could not be matched as triplets originally or as the remaining students in a triplet when one of the three in that triplet dropped out.

Implementation of Matching Criteria

In the implementation of the matching criteria, the following results were obtained:

1. Feeder IS/JHS - all triplets were matched without exception
2. IS/JHS program - 95 triplets were matched on this criterion. Where this criterion was not met, the greatest difference in reading scores of the four remaining triplets was one month, two months, or five months
3. Level of mathematics class - 97 triplets were matched on this criterion
4. Reading score on 3/76 MAT, expressed as a grade equivalent:
   a. The range of all T's, V's and A's was 3.0 to 13.0
   b. The mean reading score for the T's was 7.51, for the V's was 7.57, and for the A's was 7.50

The matching criteria, as described earlier, were:

1. Feeder Intermediate/Junior High School
2. Program to which assigned
3. Level of mathematics class
4. Reading score in the 3/76 Metropolitan Achievement Test

Table 2

Frequency Distribution of IS/JHS Reading Scores

Reading Score	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
3.0 - 3.9	3	3	4	4	3	3
4.0 - 4.9	5	8	3	7	5	8
5.0 - 5.9	16	24	19	27	14	22
6.0 - 6.9	15	39	14	41	15	37
7.0 - 7.9	20	60	17	57	21	59
8.0 - 8.9	10	70	11	68	10	69
9.0 - 9.9	8	78	5	73	7	76
10.0 -10.9	5	83	11	85	7	83
11.0 -11.9	7	90	3	88	8	91
12.0 -13.0	10	100	12	100	9	100

Table 2, the Frequency Distribution of IS/JHS Reading Scores, shows that not only are the means of the groups similar, but that the curves of all three groups are also comparable. Within each group, approximately 25 percent fall below 6.0, 50 percent between 6.0 and 9.9, and 25 percent at 10.0 and above.

Comparison of Achievement Data

Data collected on grades, attendance and punctuality were not used in the matching but were used in later analyses. However, these data were examined to assess how similar or different the three groups were. The items, as more completely defined on page 3, were:

- Grade Point Average - the mean of the four IS/JHS senior year final grades collected for each subject
- Pass/Taken Ratio - a ratio of subjects passed to subjects attempted computed on the same grades as above with 65 percent as passing
- Number of days officially absent in the IS/JHS senior year
- Number of days officially late in the IS/JHS senior year

The similarities found among the three subject subgroups on standardized reading scores were also found on the four criteria above. Analysis of variance performed on each criterion revealed no significant differences among the groups. In addition, examination of the frequency distributions for each measure showed surprising similarities. These are detailed in Table 3, Frequency Distribution of IS/JHS Senior Year Final Grade Averages; Table 4, Frequency Distribution of Days Absent in IS/JHS Senior Year; and Table 5, Frequency Distribution of Days Late in IS/JHS Senior Year.

Table 3

Frequency Distribution of IS/JHS Senior Yea. Final Grade Averages

GPA	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
38.0- 49.9	0	0	1	1	3	3
50.0- 54.9	0	0	2	3	4	7
55.0- 59.9	11	11	2	5	5	12
60.0- 64.9	14	25	7	12	9	21
65.0- 69.9	9	34	19	31	15	36
70.0- 74.9	25	60	14	45	15	52
75.0- 79.9	15	75	21	67	8	60
80.0- 84.9	12	87	11	78	19	79
85.0- 89.9	4	91	11	89	14	93
90.0- 94.5	9	100	9	98	7	100
95.0-100	0	100	2	100	0	100
N =	99		99		99	
M =	72.83		75.37		75.83	
SD =	10.03		10.71		11.95	

The mean IS/JHS average of final grades was 72.83 for the T's, 75.37 for the V's, and 73.83 for the A's. For the T's, approximately 25 percent had averages under 65.0; another 25 percent had averages between 65.0 and 72.0 percent; and the top 25 percent ranged from averages of 80.0 to 94.5. For the V's, the bottom quarter had an upper limit of 66.5; the second quarter ranged from that to 75.0 and the top quarter ranged from 83.8 to 96.5 percent. For the A's, the bottom quarter included those up to an average of 65.5, the second quarter up to 73.5, and the top quarter went from 83.0 to 94.8.

Table 4

Frequency Distribution of Days Absent in IS/JHS Senior Year

Days Absent	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	10	10	8	8	8	8
1- 5	18	28	22	30	19	27
6- 10	15	43	17	47	16	43
11- 15	11	54	14	62	16	60
16- 20	10	64	13	75	10	70
21- 25	6	70	10	85	8	78
26- 30	5	75	2	85	8	86
31- 40	13	88	5	92	5	91
41- 50	6	94	1	93	1	95
51- 60	3	97	3	96	3	96
61- 70	2	99	4	100	1	98
71- 80	0	99	0	100	2	98
81-104	1	100	0	100	2	100
N =	99		99		99	
M =	18.86		15.60		17.71	
SD =	17.80		16.14		19.22	

Attendance, as well as grades, showed similarities. Approximately one-fourth of each group was absent 3 or fewer times and one-fourth was absent between 4 and 13 times. As absence becomes greater, the similarity of pattern falls off. The greatest number of absences for the Targets was 81 days; for the Vocational Controls, 70 days; and for the Academic Controls, 104 days.

NOTE: Readers with statistical backgrounds will note that in Table 4 above, and in Table 5 which follows, the frequency intervals under Days Absent Table 4, and Days Late Table 5, are not uniform in that after a frequency of 30, the score interval jumps from a spread of 5 points to 10 points. Additionally, it is to be noted that the last score interval is displayed in the table as ranging from 81 to 104 in Table 4 and from 81 to 125 in Table 5. These frequency intervals in both tables were collapsed by the principal investigator for display purposes only. Doing so eliminates a considerable number of scaled intervals with frequencies of 0. However, the means and standard deviations for the Targets, Vocational Controls and Academic Controls were calculated by the canned computer analysis package from uniform frequency intervals of five points all the way through from 0 to the final score interval of 104 or 125 as the case may be. Thus, the statistics as displayed in the table of means and standard deviation were computed according to an accurate procedure, and do indeed statistically indicate the strength of similarity among the three components of the triplet groups in the study.

Table 5

Frequency Distribution of Days Late in IS/JHS Senior Year

Days Late	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	21	21	20	20	26	26
1- 5	19	40	24	44	21	47
6- 10	13	54	12	57	13	61
11- 15	14	68	2	59	2	63
16- 20	3	71	5	64	6	69
21- 25	8	79	12	76	7	76
26- 30	3	82	5	81	3	79
31- 40	8	90	6	87	7	86
41- 50	0	90	3	90	1	87
51- 60	5	95	4	94	5	92
61- 70	2	96	3	97	3	95
71- 80	2	99	0	97	1	96
81-125	1	100	3	100	4	100
N =	99		99		99	
M =	15.81		17.79		17.36	
SD =	19.44		23.21		23.84	

While the Vocational and Academic Controls in the triplets were equal in punctuality, the average Target arrived late to IS/JHS a greater number of times. This difference is not statistically significant.

RESULTS OF THE INTERMEDIATE/JUNIOR HIGH SCHOOL SURVEY OF CHOICES AND APPLICATION HISTORIES

The Intermediate/Junior High School Survey of Choices was designed to yield information in four areas of student response as listed on p. 6.

The Intermediate/Junior High School Data Collection Instrument yielded information on numbers of applications per student as well as providing the check against which accuracy of memory of applications and responses could be made.

The data were examined in six ways:

- A tabulation of applications, acceptances, rejections and student decisions to attend was made for vocational high schools, talent high schools (Stuyvesant High School, Bronx High School of Science, Brooklyn Technical High School, High School of Music and Art), and Education Option Programs*
- A computation of the percent of students responding to the choices of each question for the whole sample and for subsamples of those scheduled to attend their zoned school, those scheduled to attend an education options program or school, and those scheduled to attend a vocational high school
- An analysis of the differences in responses among students scheduled to attend their zoned school, those scheduled to attend an education option school or program and those scheduled to attend a vocational high school
- A computation of the percent of triplet members (by Targets, Vocational Controls and Academic Controls) responding to the choices of each question
- An analysis of the differences in responses among Targets, Vocational Controls and Academic Controls
- A comparison of the disaffection among Targets, Vocational Controls and Academic Controls

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* Education Option Programs offer courses centering on some common theme, often a career-related or occupational theme. Examples of these programs are criminal justice, agriculture, and communications. In some cases, entire schools are education option schools, such as Norman Thomas H.S. In other cases programs are offered within zoned schools. In all cases, the education option programs are open to students from the whole City or an entire Borough. Special applications are made to these programs just as they are for the talent and vocational high schools.

Applications, Acceptances, Rejections, and Decisions

In June 1976, 67,294 students were promoted from the final grade of their intermediate or junior high schools city-wide. This included 36,347 eighth-grade promotions and 32,734 ninth-grade promotions. (This figure does not include eighth graders promoted in a seven-eight-nine junior high school. It does include special progress classes.) Of these, 14,666 were scheduled for the September 1976 opening register of the vocational high schools, 8,645 from eighth grade and 6,021 from ninth grade.

The schools surveyed had a total of 3,956 promotions, 5.7 percent of the City total. Survey responses and complete IS/JHS application histories had been collected for 2,437 subjects, or 61.6 percent of the schools surveyed. The respondents, therefore, represent 3.5 percent of the total population of students promoted from the last grade of IS/JHS.

Findings from the Application History portion of the IS/JHS Data Collection Instrument are detailed below. It should be noted that these findings were not based on self-reports of the students, but were culled from the official records of the intermediate/junior high schools participating.

The findings are:

- 25 percent of the sample applied to vocational high school. They each filed an average of 1.29 applications.
- 22.1 percent of those who applied to vocational high school were denied admission.
- Of those accepted into a vocational high school, 77.9 percent went to a vocational high school, 10.9 percent went to their zoned schools, 7.4 percent went to science and talent schools, 3.1 percent chose an education option program, and 0.6 percent went to private, parochial or other schools.
- Of those denied admission to a vocational high school, 86.0 percent went to their zoned high schools, 11.8 percent went to education option programs, and 2.2 percent went to science and talent schools.
- For the entire sample, 69.0 percent went to their zoned academic high schools, 15.7 percent went to a vocational high school, 8.0 percent entered an education option program, 7.5 percent went to a science and talent school, and 1.0 percent went to a private, parochial or other school.

Responses to the IS/JHS Survey of Choices by All Students

The Survey of Choices (See Appendix A) was administered to all IS/JHS seniors present on a given day in late May or early June. At this point, the high school application process was complete. Students knew not only the results of all their applications, but also which high school they would be attending, either by choice or by default.

Examination of the responses of the 2,437 graduates showed that virtually everyone planned to finish high school, with about three-fourths planning to continue after high school. This did not seem to exclude a desire for occupational training in high school, since only 7.8 percent of the respondents replied "none" to a question on area of interest in occupational training while in high school. Few students responded positively to knowledge of obtaining occupational training in other than their home school. "Need more information" was the response of 46.9 percent of the group to this question.

The IS/JHS seniors generally felt they had gotten the most help from their parents or family (43.3 percent) with the response "no one" (30.3 percent) coming second. Nevertheless, more than half the students expressed satisfaction in the questions related to feelings on filling out applications (Q.9): why they were attending a particular high school (Q.12); and feelings about starting high school (Q.13).

Table 6, Responses to the IS/JHS Survey of Choices - All Students in Study, details the percentage responding for the entire sample, and the sample broken down into those scheduled to attend their zoned, academic high school, those scheduled to attend an education option program and those scheduled to attend a vocational high school.

Table 6

Responses to the IS/JHS Survey of Choices
All Students in Study

Questions and Answers	% Whole	% Att. Zoned H.S.	% Att. Ed. O.P.	%Att. Voc. H.S.
	N=2,437	N=1,656	N=195	N=382
1. How certain of career wanted*				
Very sure	39.5	36.6	46.2	55.2
Think	24.0	24.2	27.2	16.6
Haven't made up mind	33.4	36.0	24.6	24.9
2. How long plan to stay in school				
Leave as soon as possible	1.0	1.1	1.0	0.3
Finish high school	22.6	23.2	20.0	31.9
Continue after high school	75.7	74.9	77.9	67.3
5. Most important reason high school application				
Very good education	45.5	44.1	42.0	36.4
Learn occupation	26.6	21.6	36.4	48.7
Friends or relatives go	2.1	2.7	1.0	0.2
Don't know anyone there	2.9	2.8	4.6	3.4
It's neighborhood school	15.3	21.3	6.7	1.3
It's not neighborhood school	0.9	1.1	1.0	0.2
To see if I could get in	1.1	1.2	1.5	0.8
7. Who gave most help				
Parents or family	43.3	43.5	41.5	37.5
Friends	6.2	6.9	6.2	4.7
Guidance counselor	10.3	8.7	13.3	17.8
Teacher	6.3	5.9	3.6	6.5
Some other adult	1.3	1.0	2.6	2.6
No one	30.3	31.9	30.8	28.5
8. Source of high school information**				
High school directory	60.3	54.3	76.9	73.0
Other printed material	15.1	14.3	13.3	13.6
In classroom	21.1	23.0	13.8	14.4
In assembly	28.4	30.4	11.8	20.7
By talking to counselor	37.5	35.5	43.0	42.7

*For the exact wording of the questions, please see Appendix A.
**More than one choice permitted.

Table 6 (cont'd)

Responses to the IS/JHS Survey of Choices
All Students in Study

Questions and Answers	% Whole	% Att. Zoned H.S.	% Att. Ed. O.P.	% Att. Voc. H.S.
9. Feelings on filling out h.s. application				
Knew what I was doing	58.3	54.0	58.5	69.9
Some information, but confusing	30.4	32.3	28.2	25.4
Not enough information	9.1	11.0	10.8	3.9
12. Why attending your particular h.s.				
No choice	15.3	20.0	12.8	3.7
Good education	58.6	50.6	56.4	77.0
Not first choice, but okay	23.6	26.5	26.2	18.6
13. Feelings about starting h.s.				
Can't wait	36.6	33.3	36.4	49.0
Okay, but nervous	39.1	39.6	35.4	35.0
Wish it were different h.s.	8.9	10.2	14.4	4.7
It doesn't matter	12.8	14.3	11.3	10.5
14. Interest in occupational training in high school				
Clerical/business	21.0	21.2	23.6	21.7
Mechanics/construction	21.0	17.6	20.0	40.6
Services to people	25.4	28.0	26.2	19.6
Agriculture	3.9	4.5	4.1	1.0
Arts	13.5	12.3	15.4	9.7
None	7.8	8.2	6.7	3.4
15. Knowledge of availability of training**				
Program in own high school	53.3	48.9	54.4	69.4
After school Bd. of Ed. program	7.9	7.9	7.7	8.4
Shared instruction program	4.3	5.0	2.1	3.9
Private school	6.1	6.8	3.6	3.9
Need more information	46.9	49.8	50.3	34.3

*For the exact wording of the questions, please see Appendix A.
**More than one choice permitted.

Responses to the IS/JHS Survey of Choices By the Students Selected For Follow-up

From the large group of 2,437 students 297 were selected for follow-up as described in the Methodology. There were 99 triplets, each composed of a Target (T), an Academic Control (A), and a Vocational Control (V).

Table 7, below, shows the statistical significance of variations in responses by students enrolled in different types of high school programs. Data are listed for only those questions for which there were significant variations. (See Appendix A.)

The data indicate that vocational students responded more positively to most questions than the other categories of students.

Table 7

Chi-Square Analysis of Differences in Responses to the IS/JHS Survey of Choices by Academic vs. Education Option vs. Vocational Students

	Academic, Ed. Option, & Voc. HS			Academic vs. Ed. Option & Voc. HS			Ed. Option vs. Academic & Voc. HS			Voc. vs. Ed. Option & Academic		
Question	X^2 Calc.	X^2 Crit.	Level of Signif.	X^2 Calc.	X^2 Crit.	Level of Signif.	X^2 Calc.	X^2 Crit.	Level of Signif.	X^2 Calc.	X^2 Crit.	Level of Signif.
1	35.06	18.45	.001	44.44	13.815	.001	7.65	5.991	.05	41.8	13.815	.001
2	30.28	18.465	.001	5.63	4.605	.1	2.18		NS	13.62	10.6	.005
5	189.33	32.909	.001	186.0	22.4	.001	22.3	18.55	.005	158.58	22.4	.001
7	41.61	29.588	.001	36.02	20.517	.001	5.45		NS	32.94	20.517	.001
9	70.7	18.465	.001	25.36	13.815	.001	.744		NS	32.99	13.815	.001
12	179.51	18.465	.001	123.7	13.815	.001	3.11		NS	173.26	13.815	.001
13	41.37	22.457	.001	23.59	16.268	.001	6.19		NS	35.82	16.268	.001
14*	11.98	9.210	.01	9.96	7.88	.005	.189		NS	11.11	10.827	.001

*In this question, respondents were asked occupational training choice. For this question only, data were treated for all positive choices grouped vs. choice of none.

Table 8, Responses to the IS/JHS Survey of Choices by Triplets, shows the frequency of response to the survey questions by each of these groups.

Table 8

Responses to the IS/JHS Survey of Choices
by Triplets

N = 99

Questions	No. Targets	No. Acad.	No. Voca.
1. How certain of career wanted*			
Very sure	47	32	49
Think I want to be	16	26	22
Haven't made up mind	27	34	26
2. How long plan to stay in school			
Leave as soon as possible	1	2	0
Finish high school	27	33	34
Continue after high school	70	64	64
5. Most important reason high school application			
Very good education	46	46	37
Learn occupation	32	22	49
Friends or relatives go	3	3	0
Don't know anyone there	4	3	3
It's neighborhood school	5	17	0
It's not neighborhood school	1	3	0
To see if I could get in	0	2	1
7. Who gave most help			
Parents or family	34	36	36
Friends	4	10	2
Guidance counselor	11	13	18
Teacher	13	10	10
Some other adult	2	1	2
No one	31	28	30
8. Source of high school information**			
High school directory	51	48	67
Other printed material	7	14	19
In classroom	26	23	16
In assembly	29	30	18
By talking to counselor	49	37	39

Table 8 (Cont'd.)

Responses to the IS/JHS Survey of Choices
by Triplets

N = 99

Questions	No. T's	No. A's	No. V's
9. Feelings of filling out high school application			
Knew what I was doing	56	51	72
Some information but confusing	26	31	21
Not enough information	12	13	5
12. Why attending your particular high school			
No choice	22	14	2
Good education	48	57	74
Not first choice, but okay	26	26	21
13. Feelings about starting high school			
Can't wait	39	35	51
Okay, but nervous	23	39	31
Wish it were different h.s.	20	11	4
It doesn't matter	12	11	12
14. Interest in Occupational Training in High School			
Clerical/business	25	19	18
Mechanics/construction	28	13	44
Services to people	19	37	19
Agriculture	1	3	0
Arts	11	9	13
None	4	9	2
15. Knowledge of Availability of Training**			
Program in own high school	44	40	68
After school Bd. of Ed. prog.	8	9	9
Shared instruction program	3	12	2
Private school	10	4	6
Need more information	50	54	35

*For the exact wording of the questions, please see Appendix A.
**More than one choice permitted.

In Table 7, chi-square analysis of difference was applied to the responses to Questions 1, 2, 5, 7, 9, 12, 13, and 14 by the three subgroups. For the following questions significant differences were found: 5 - Reason for high school application; 9 - Feeling of knowing what one was doing in high school applications; 12 - Reason for choosing high school attending; and 13 - Feelings about going to high school. Table 9, Analysis of Differences in Responses to the IS/JHS Survey of Choices by Triplets, details this chi-square analysis.

Table 9

Chi-Square Analysis of Differences in Responses to the IS/JHS Survey of Choices by Triplets

	T's A's and V's			T vs. AV			A vs. TV			V vs. TA		
Question	X^2 Calc.	X^2 Crit.	Level of Signif.	X^2 Calc.	X^2 Crit.	Level of Signif.	X^2 Calc.	X^2 Crit.	Level of Signif.	X^2 Calc.	X^2 Crit.	Level of Signif.
1	7.53		NS									
2	4.01		NS									
5	41.11	28.3	.005	4.25		NS	30.69	22.45	.001	26.97	22.45	.00
7	9.41		NS									
9	8.46		NS	1.42		NS	4.69		NS	8.82	7.824	.02
12	22.53	14.86	.005	13.95	13.815	.001	.558		NS	19.29	13.815	.001
13	18.50	18.168	.02	12.37	11.34	.01	4.81		NS	10.54	9.8	.02
14*	5.84		NS									

*In this question, respondents were asked occupational training choice. For this question only, data were treated for positive choices grouped vs. choice of none.

Measures of Disaffection

In examining the responses of the subjects selected for follow-up of the triplets, a particular measure of disaffection was used. For the purposes of this study, "disaffection" is defined as students' indifference to their high school admission and choice of program. It is assumed that since all students are notified in writing as to the high school(s) they should be attending in the fall, and this information is available upon request from the IS/JHS grade advisor or guidance counselor, if the student has legitmately lost or "forgotten" this information, that a NOT KNOW response demonstrates lack of interest or concern. It could also indicate that application rejection might be a cause of this indifference or disaffection.

- Survey question 3 asked students the kind of high school applications they made. "Knowing" was defined for T's and V's as a positive response.

- Survey question 10 asked the kind of high school to which they were accepted. For T and A students, no response on either question was counted as a "knowing" response. For V's, however, one or more of the responses had to be checked to be scored as a "knowing" response.

- Survey question 11 asked the name of the high school. "Knowing" was defined as supplying the answer which corresponded to junior high school records as substantiated by the high schools themselves.

The results as shown in Table 10, IS/JHS Survey Measures of Disaffection, show a highly significant difference for all three criteria of disaffection. The factor of "not knowing" is dependent upon the denial of high school choice as defined in the T's, A's and V's. There is only one chance in a thousand that this occurred by chance. Further, Table 11, Measures of Disaffection: Comparison of Differences Between Collapsed Groups, shows the level of significance in differences when the groups are "collapsed" so that each group is measured against the other two. In other words, the hypothesis that students who were denied admission would "forget" or "deny" their application experience, and would show less certainty about the school they were to attend, was borne out.

Table 10

IS/JHS Survey Measures of Disaffection

Treatment	Measure of Disaffection			
High School Applications	No. T's	No. A's	No. V's	Total
	N=99	N=99	N=99	N=297
Knew	52	81	89	222
Did not know	47	18	10	75
	X^2 calc = 40.56			
	X^2 crit (df = 2, x = .001) = 13.815			
High School Acceptance				
Knew	74	96	85	255
Did not know	25	3	14	42
	X^2 calc = 20.12			

High School Attending	No. T's N=99	No. A's N=99	No. V's N=99	Total N=297
Knew	54	72	90	216
Did not know	45	27	9	81

X^2 calc = 33

In all cases differences were significant at the .001 level.

Table 11

Measures of Disaffection:
Comparison of Differences Between Collapsed* Groups

	T vs. AV	A vs. TV	V vs. TA
	X^2 Calc.	X^2 Calc.	X^2 Calc.
Applications	38.85**	3.93	18.06**
Acceptances	15.09**	15.09**	0
School Attending	24.75**	0	24.75

X^2 crit = 10.827
(df = 1, x = .001)

*Collapsed means student group compared to the other two student groups, and not to all students in the study as a combined group including themselves.
**These differences are significant at the .001 level.

HIGH SCHOOL RETENTION AND PERFORMANCE

Methodology and Results by Terminology and Results by Term

For five terms in high school, data were collected on high school retention and performance for the 297 subjects of the three matched subgroups: Targets (T's), Vocational Controls (V's) and Academic Controls (A's).

Retention had been defined as continuing in any New York City public high school. Therefore, not only had student discharges from the system been monitored, but also inter-high school movement. When students changed high schools, as many did, their records were sought from the new school.

Performance was measured on four criteria: the grade point average; a pass/taken ratio, a ratio of subjects passed to subjects attempted; attendance; and punctuality.

The results of the analyses of data are presented in this section. For each term and then for the sum of five terms, retention is presented first, followed by the performance data: GPA, PTR, attendance and punctuality. For each part of these performance data, results of an analysis of covariance are given for all complete triplets. A triplet remained complete when all of its members - the matched T and A and V - were retained. Following the results of these analyses, a frequency distribution of the data is given.

Therefore, the frequency distributions in the tables and analyses are on two subgroups:

(a) on sets of triplets remaining intact, and

(b) on all students including intact triplets and remaining members of triplet groups no longer intact. The latter population is designated "All Students Retained" in the table headings and text.

Term 1 - Fall 1976

In general, in term 1, the Vocational Controls showed the strongest performance. They had the highest GPA and PTR* and the fewest days absent. These differences were all statistically significant ($p \lesssim .05$). The most striking difference between the V's and the T's was in retention. Eighteen T's dropped out. All V's were retained. Those T's who were retained did less well than the V's but better than the A's on GPS, PTR and attendance.

Retention

The greatest movement out of the schools was by members of the Target group. Of these, 18 dropped out of high school, 3 moved to vocational high schools, and 4 transferred to other academic/comprehensive high schools. Of the Academic Controls, 6 dropped out, 2 moved to vocational high schools, and 2 went to other academic high schools. None of the Vocational Controls dropped out, but 4 moved to academic high schools.

*GPA - Grade Point Average PTR - (subjects) Passed to (subjects) Taken Ratio

Table 12

Frequency Distribution of Term 1 Retention
by Triplets

	Destination	Targets N=99	Vocational Controls N=99	Academic Controls N=99
Not Retained	Dropped Out	9	0	4
	Moved NYC	6	0	2
	Alt HS	3	0	0
Retained	Moved to VHS	3	0	2
	Moved to A/C HS	4	4	2
	Same School	74	95	89

Table 12, Frequency Distribution of Term 1 Retention by Triplets, breaks the number of dropouts into three subgroups, based on the official reason for discharge on the high school record: those who moved out of New York City, those who transferred to an alternative school: and the remainder: those who were average, went to work, or were "not found".

Grade Point Average (GPA)

The means of the grade point averages for the three subgroups of triplets were 64.43 for Targets, 69.83 for the Vocational Controls and 62.73 for the Academic Controls. There were 77 members in each subgroup. Analysis of variance indicated that this was a statistically significant difference (F=6.283, df=2/227, p=.002). A Scheffe procedure to test for homogeneous subsets indicated that the Vocational Controls were significantly different from the Academic Controls and Targets (p = .05).

Table 13

Analysis of Covariance Summary Table for GPA Term 1 Triplets
Grouped Together

Source	Sum of Square (SS)	Degrees of Freedom (df)	Mean Squares (MS)	F	Significance of F
GPA IS/JHS	7093.51	1	7093.51		
GPA Term 1	1461.11	2	730.56	5.21	0.006
Error	31245.24	223	140.11		
Total	39799.86	226	176.10		

Analysis of covariance was performed on the same data with IS/JHS GPA as the covariate. This was done to control for variance attributable to initial differences in performance. The analysis of covariance, reported in Table 13, also indicated a significant difference in GPA after controlling for IS/JHS performance. It should be noted that these analyses were performed only on whole triplet groups.

Table 14

Frequency Distribution of GPA Term 3
All Students Retained*

GPA	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
up to 49.9	10	12	5	5	11	12
50.0 - 59.9	13	28	6	11	23	37
60.0 - 64.9	12	43	20	31	12	49
65.0 - 69.9	13	59	27	59	12	62
70.0 - 74.9	20	84	11	70	14	77
75.0 - 79.9	7	93	15	85	12	90
80.0 - 84.9	3	96	6	91	5	96
85.0 - 89.9	2	99	8	99	4	100
90.0 -100	1	100	1	100	0	100
N=	81		99		93	
Mean=	64.63		69.25		64.10	

Examination of the performance of all students retained at the end of term 1 shows the same relative placement of group means: Targets=64.63; V's=69.25; A's=64.10. Table 14 details a frequency distribution of these students according to Grade Point Average.

*Not just triplets remaining.

Table 15

Analysis of Covariance Summary Table
for Pass/Taken Ratio Term 1 Triplets

Source	SS	df	MS	F	Signifi. of F
PTR JHS	1.02	1	1.02		
PTR Term 1	1.52	2	.76	7.98	0.000
Error	21.18	223	.10		
Total	23.71	226	.11		

Pass/Taken Ratio

The Pass/Taken Ratio is based on the same raw data as the GPA. The means of the group were: T's=.65; V's=.77; A's=.56. There were 77 subjects in each of the subgroups. Analysis of variance showed the difference was statistically significant (F=7.889, df=2/227, P = .0005.

The Scheffé procedure ($p.<05$) showed that the A's and T's formed a homogeneous subset as did the T's and V's.

The analysis of covariance confirmed the significance of the variable PTR for term 1 when controlling for variance attributable to the IS/JHS Pass/Taken Ratio. The results are reported in Table 15.

Table 16

Frequency Distribution of Pass/Taken Ratio Term 1
All Students Retained

Pass/Taken Ratio	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0 - .25	14	17	8	8	22	24
.26 - .50	13	33	6	14	11	35
.51 - .75	17	54	31	46	19	56
.76 -1.00	37	100	54	100	41	100
N=	81		99		93	
Mean=	.65		.76		.62	

The frequency distribution of the Pass/Taken Ratio for all subjects combined again indicates a descending pattern of performance: V's, T's, A's. This is detailed in Table 16.

Attendance

The mean number of days absent for each of the triplet subgroup members was: T=13.75, V=9.06, A=16.01. Analysis of variance showed this to be a significant difference (F=3.687, df=2/225, P=.027).

Table 17

Analysis of Covariance Summary
Table for Days Absent Term 1 - Triplets

Source	SS	df	MS	F	Signif. of F
Days Abs JHS	1448.32	1	1448.32		
Days Abs Term 1	1630.32	2	815.15	3.20	0.043
Error	56779.52	223			
Total	59858.15	226	264.85		

The analysis of covariance controlling for IS/JHS days absent also showed a significant difference as presented in Table 17.

Table 18

Frequency Distribution of Days Absent
Term 1-All Students Retained

Days Absent	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	2	2	10	10	6	7
1-4	21	28	30	42	19	27
5-9	20	53	18	60	22	52
10-19	22	80	28	90	22	76
20-29	10	93	7	97	8	85
30-39	1	94	1	92	5	90
40 or more	5	100	2	100	9	100
N=	81		96		91	
Mean=	13.7		49.46		15.71	

The frequency distribution of days absent for all subjects retained at the end of term 1 is presented in Table 18. It may be noted that the V's were absent least frequently, the A's most frequently and the T's fell between.

Punctuality

The performance of the triplet subgroups on punctuality in term 1 did not follow the pattern of the other three high school measures. The Targets had the fewest days late, 6.76, followed by the Vocational Controls, 7.05, and then the Academic Controls, 8.36. These differences were not statistically significant in either analysis of variance or analysis of covariance.

Table 19

Frequency Distribution of Days Late Term 1
All Students Retained

Days Late	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	24	30	17	17	32	35
1- 4	27	64	31	50	28	66
5- 9	12	79	23	74	8	75
10-19	9	90	16	91	12	88
20-29	4	95	8	99	3	91
30-39	1	96	1	100	3	95
40 or more	3	100	0	100	5	100
N=	80		96		91	
Mean=	6.53		6.79		8.18	

The frequency distribution of days late for all students retained, presented in Table 19, also shows the most punctual performance among Targets and the least among Academic Controls.

Term 2 - Spring 1977

In the second term of their high school study which for the intermediate school graduates would have been the second term of high school and for the junior high school graduates the third term of high school, the rank order of the T's, V's, and A's remain the same in terms of their relative performance. Overall, the Vocational Controls had the highest GPA and PTR and the fewest days absent. The Targets ranked second on these three measures and the Academic Controls ranked last. However, in this second term of study, the mean performances of the three groups did show some differences in that the V's lost ground slightly and both the T's and A's gained ground. Statistically, in the first term, the performance of the V's was significantly superior. However, in the second term the differences between the V's, T's and A's was not statistically significant. The number of dropouts in the second term was relatively similar in all three groups. However, the total number retained at the end of the second term was understandably lowest for the Targets because of their high first term attrition.

Table 20

Frequency Distribution of Term 2 Retention
by Students Enrolled at Start of Term

	Destination	Targets N=81	Vocational Controls N=99	Academic Controls N=93
Not Retained	Dropped Out	3	3	4
	Moved NYC	1	1	1
	Alt HS	3	2	3
Retained	Moved to VHS	0	1	0
	Moved to A/C HS	1	5	0
	Same School	73	87	85

Retention

The movement out of the New York City public schools was similar in the three groups, as detailed in Table 20. However, the number retained by the end of the term was lowest for the Targets because of combined attrition in terms 1 and 2. One might note the relatively greater movement of V's within the system.

Grade Point Average

Neither analysis of variance nor of covariance showed statistical significance in the difference in the means of the whole triplet subgroups: T=66.87, V=68.94, A=64.19.

Table 21

Frequency Distribution of GPA Term 2
All Students Retained

GPA	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
up to 49.9	9	12	10	11	19	22
50.0 - 59.9	12	29	9	21	8	31
60.0 - 64.9	6	37	9	30	11	44
65.0 - 69.9	10	51	16	48	16	63
70.0 - 74.9	17	74	19	68	9	73
75.0 - 79.9	12	90	14	84	13	88
80.0 - 84.9	4	96	7	91	5	94
85.0 - 89.9	2	99	6	98	3	98
90.0 -100.	1	100	2	100	2	100
N=	73		92		86	
Mean=	65.19		67.28		63.39	

Table 21, Frequency Distribution of GPA Term 2 - All Students Retained, shows a similar ordering of the groups.

Pass/Taken Ratio

Neither analysis of variance nor of covariance showed statistical difference in the pass/taken ratio means of the whole triplet subgroups: T=.73, V=.73, A=.68.

Table 22

Frequency Distribution of Pass/Taken Ratio Term 2
All Students Retained

GPA	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0- .25	13	18	14	15	21	24
.26- .50	10	32	9	25	6	31
.51- .75	9	44	15	41	16	50
.76-1.00	41	100	54	100	43	100
N=	73		92		86	
Mean=	.69		.72		.62	

Table 22, The Frequency Distribution of Pass/Taken Ratio Term 2 - All Students Retained, shows a slightly greater difference between T's and V's than the difference in the whole triplet subgroups.

Attendance

Neither analysis of variance nor of covariance showed significant statistical differences in the mean number of days absent of whole triplet subgroups.

Table 23

Frequency Distribution of Days Absent Term 2
All Students Retained

Days Absent	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0	4	6	7	8	4	5
1- 4	17	30	22	32	19	28
5- 9	19	57	20	54	18	49
10-19	15	79	25	81	20	73
20-29	5	86	8	90	4	78
30-39	6	94	1	91	4	83
40 or more	4	100	8	100	14	100
N=	70		91		83	
Mean=	14.66		13.42		18.65	

The frequency distribution of days absent in term 2 for all subjects retained followed a pattern similar to that of subgroup members. This is detailed in Table 24.

Punctuality

The number of days late did not follow the pattern of the other three measures. Although neither analysis of variance nor of covariance showed statistical significance, the T's and A's seemed closer to each other and best in performance with the V's having the greatest number of days late. The mean number of days late for each of the whole triplet subgroups is: T=6.83, V=10.39, A=6.55.

Table 24

Frequency Distribution of Days Late Term 2
All Subjects Retained

Days Late	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	23	33	18	20	39	49
1- 4	20	62	27	49	17	70
5- 9	11	78	15	66	5	76
10-19	9	91	17	85	9	88
20-29	3	96	6	91	4	92
30-39	0	96	3	95	1	94
40 or more	3	100	5	100	5	100
N=	69		91		80	
Mean=	6.39		9.48		7.43	

The frequency distribution for days late in term 2, for all subjects retained, is reported in Table 24.

Term 3 - Fall 1977

The general patterns of performance established in the first year continued. The retention of the Targets remained poorest. On the other measures, with the exception of punctuality, the Vocational Controls were generally strongest, the Targets showed the next best performance, and the Academic Controls had the lowest performance.

Retention

The Targets, who began the second year (term 3) with 74 students retained, lost 6. The Vocational Controls which began with 93, lost 5; and the Academic Controls, which began the year with 85, lost 4. Thus while the difference in attrition term by term is less, the net effect is still a much lower rate of retention by the Targets. Table 25 details retention and movement in Term 3.

Table 25

Frequency Distribution of Term 3 Retention
of Students Enrolled at Start of Term

Destination		Targets N=94	Vocational Controls N=93	Academic Controls N=85
Not Retained	Dropped Out	4	1	2
	Moved NYC	2	4	1
	Alt. HS	0	0	1
Retained	Moved to VHS	0	0	0
	Moved to A/C HS	2	3	3
	Same School	66	85	78

Grade Point Average

Differences in term 3 GPA were not statistically significant in either analysis of variance or of covariance. However, the means of the whole triplet subgroup GPA's continued the pattern established in terms 1 and 2: T=64.99; V=68.92; A=64.80.

The Frequency Distribution of GPA Term 3 - All Students Retained, Table 26, shows slightly greater differences in the same pattern.

Table 26

Frequency Distribution of GPA Term 3
All Students Retained

GPA	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
up to 49.9	11	16	11	13	16	20
50.0- 59.9	7	27	10	24	13	36
60.0- 64.9	8	39	10	36	6	43
65.0- 69.9	13	58	15	53	9	54
70.0- 74.9	8	70	10	64	17	75
75.0- 79.9	8	82	17	84	8	85
80.0- 84.9	7	93	8	93	4	90
85.0- 89.9	5	100	4	98	6	98
90.0-100.	0	100	2	100	2	100
N=	67		87		81	
Mean=	65.33		67.11		64.66	

Pass/Taken Ratio

The respective pass/taken ratios for whole triplet subgroups of T=.62, V=.75, A=.65 again did not reach statistical significance using analysis of variance or covariance.

Table 27

Frequency Distribution of Pass/Taken Ratio Term 3
All Students Retained

Pass/ Taken Ratio	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0- .25	11	16	13	15	19	23
.26- .50	11	33	11	28	11	37
.51- .75	8	45	13	43	7	46
.76-1.00	37	100	50	100	44	100
N=	67		87		64	
Mean=	.66		.72		.81	

The frequency distribution for all students retained in term 3 showed a difference in rank ordering in the means of pass/taken ratios for the whole triplet subgroups. This is detailed in Table 27 above.

Attendance

The difference in the number of days absent for whole triplet subgroups in term 3 reached statistical significance using analysis of variance. The T's were absent 12.92 days; the V's 9.43 days; and the A's 18.22 days. ($F=3.040$, $df=2/141$, $p<.05$).

Controlling for initial differences using IS/JHS days absent as the covariate produced a nonsignificant result.

The Frequency Distribution of Days Absent Term 3 - All Students Retained is given in Table 28.

Table 28

Frequency Distribution of Days Absent Term 3
All Students Retained

Days Absent	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0	3	5	6	7	5	6
1- 4	18	33	25	37	20	32
5- 9	14	56	18	59	18	54
10-19	12	75	22	86	18	77
20-29	7	86	6	93	4	82
30-39	4	92	3	96	6	90
40 or More	5	100	3	100	8	100
N=	63		83		79	
Mean=	14.51		11.24		16.95	

Punctuality

The performance on this variable again differed from the others for whole triplet subgroups. The T's were late the least, 5.38 days; the V's the most, 11.14 days; and the A's were absent 6.08 days. The analysis of variance showed the difference to be significant. ($F=3.30$, $df=2/139$, $p < .05$).

Table 29

Frequency Distribution of Days Late Term 3
All Students Retained

Days Late	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0	25	42	16	19	31	41
1-4	15	67	21	44	22	70
5-9	9	82	20	68	9	82
10-19	5	90	13	83	6	89
20-29	2	93	6	90	2	92
30-39	1	95	5	96	1	93
40 or More	3	100	3	100	5	100
N=	60		84		76	
Mean=	6.23		9.55		6.76	

Table 30

Analysis of Covariance Summary Table
for Days Late Term 3
(Triplets)

Source	Sum of Squares	Degrees of Freedom	Mean of Squares	F Ratio	Signif. of F Ratio
Days Late JHS	642.40	1	642.40		
Days Late Term 3	908.06	2	454.03	3.48	0.034
Error	17,096.61	137	130.63		
TOTAL	19,447.07	140	138.91		

Analysis of covariance, using IS/JHS days late as the covariate, also reached the required level of statistical significance, as reported above in Table 30. Vocational Controls did not have a higher incidence of lateness to begin with.

Term 4 - Spring 1978

In term 4, attrition from the Targets' already reduced group was much greater than that of the Vocational Controls and slightly greater than that of Academic Controls.

The high school performance of the three triplet subgroups remained close to each other with T's generally highest, V's second, and A's third. The only statistically significant difference was in punctuality, with the T's performing best, the A's second, and the V's third.

Table 31

Frequency Distribution of Term 4 Retention
by Students Enrolled at Start of Term

Destination		Targets N=68	Voc. Con. N=88	Ac. Con. N=81
Not Retained	Dropped Out	5	1	3
	Moved NYC	0	0	1
	Alt. HS	1	0	1
Retained	Moved to VHS	0	0	0
	Moved to A/C HS	3	3	1
	Same School	59	84	75

Retention

At the start of term 4, 68 Targets were enrolled; at the end of the term, 62 remained. In the same period, 88 Vocational Controls began the term and 87 remained. Eighty-one Academic Controls began the term, 76 remained. Table 31 details the destinations of those students retained and those not retained.

Grade Point Average

The means of term 4 GPA's for whole triplet subgroups showed the T's and V's very close to each other and the A's slightly lower. T=65.37, V=65.91, A=63.42. The differences were not statistically significant in either analysis of variance or covariance.

Table 32

Frequency Distribution of GPA Term 4
All Students Retained

GPA	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
up to 49.9	10	16	14	16	20	26
50.0- 59.9	4	23	11	29	7	36
60.0- 64.9	7	34	13	44	7	45
65.0- 69.9	7	45	10	56	8	55
70.0- 74.9	10	61	8	65	16	76
75.0- 79.9	12	81	14	81	8	87
80.0- 84.9	9	95	11	94	6	95
85.0- 89.9	2	98	1	95	3	99
90.0-100.	1	100	4	100	1	100
N=	62		86		76	
Mean=	66.86		65.35		63.15	

Table 32 details the frequency distribution of term 4 Grade Point Average - all students retained. It may be noted that the Targets did better than either the Vocational or Academic Controls.

Pass/Taken Ratio

For the whole triplet subgroups the means for Pass/Taken Ratio showed a small difference with the T's strongest at .70, the V's next at .68, and the A's third at .64. These differences were not statistically significant.

Table 33

Frequency Distribution of Pass/Taken Ratio Term 4
All Students Retained

Pass/ Taken Ratio	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0- .25	12	19	13	21	19	25
.26- .50	4	26	11	34	7	34
.51- .75	6	35	8	43	10	47
.76-1.00	40	100	49	100	40	100
N=	62		86		76	
Mean=	.71		.67		.63	

In general, the frequency distributions of the subjects' Pass/Taken Ratio for all students retained resembles that for the triplets. Differences are not significant.

Attendance

A comparison of days absent in term 4 for whole triplet subgroups showed the T's also strongest on this criterion: T=15.91, V=17.33, A=20.32. These differences did not reach a level of statistical significance. However, the pattern was maintained in an examination of the performance of all students retained. This is detailed in Table 34, Frequency Distribution of Days Absent Term 4 - All Students Retained.

Table 34

Frequency Distribution of Days Absent Term 4
All Students Retained

Days Absent	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	1	2	9	11	3	4
1- 4	13	23	18	33	12	20
5- 9	16	49	21	58	24	51
10-19	15	74	15	76	19	76
20-29	10	90	6	83	1	78
30-39	1	92	2	86	3	82
40 or More	5	100	12	100	14	100
N=	61		83		76	
Mean=	14.61		17.25		20.40	

Punctuality

Table 35

Analysis of Covariance Summary Table
For Days Late Term 4
(Triplets)

Source	Sum of Squares	Degrees of Freedom	Mean of Squares	F Ratio	Signif. of F Ratio
Days Late JHS	37.16	1	37.16		
Days late term 4	982.24	2	491.12	5.78	0.004
Error	10,622.38	125	84.79		
TOTAL	11,641.79	128	90.95		

Both analysis of variance and analysis of covariance showed statistically significant differences in whole triplet subgroup punctuality for term 4. The T's were late 3.17 times, the A's 5.14 times, and the V's 9.60 times. ($F=5.46$, $df=2/126$, $p<.005$). The results of analysis of covariance are reported in Table 35 above.

Table 36

Frequency Distribution of Days Late Term 4
All Students Retained

Days Late	Targets Freq.	Targets Cum Pct.	Vocational Controls Freq.	Vocational Controls Cum Pct.	Academic Controls Freq.	Academic Controls Cum Pct.
0	23	40	19	23	32	43
1- 4	18	71	18	45	22	72
5- 9	8	84	20	69	7	81
10-19	5	93	13	84	4	87
20-29	1	95	7	93	5	93
30-39	0	95	4	98	3	97
40 or More	3	100	2	100	2	100
N=	58		83		75	
Mean=	5.52		9.07		5.87	

When the performance of all students retained was examined, as detailed in Table 36, the T's and A's showed less difference in mean days late than they did in the analysis of whole triplet subgroups.

Term 5 - Fall 1978

The Vocational Controls had greater attrition in term 5 than in any other period, with 14 students dropping out. However, they still had more students left by the end of term 5 than either of the other two groups.

Performance among the three groups on GPA, PTR, and attendance was similar with the V's again performing generally best, and the T's second. Punctuality was again the only statistically significant difference with the T's and A's showing far fewer days late than the V's.

Retention

Vocational Controls showed a sharp drop in retention, losing 14 of the 87 students who began term 5. Academic Controls lost 8 of 76 students, and Targets lost the least number, 4 of 62 students.

Table 37

Frequency Distribution of Term 5 Retention
by Students Enrolled At Start of Term

	Destination	Targets N=62	Voc. Con. N=87	Ac. Con. N=76
Not Retained	Dropped Out	3	11	5
	Moved NYC	1	2	1
	Alt. HS	0	1	2
Retained	Moved to VHS	0	0	0
	Moved to A/C HS	2	3	3
	Same School	56	70	65

The destination of retained and not retained students for all students remaining in the study is detailed in Table 37.

Grade Point Average

In term 5, V's performed best, with a mean GPA of 69.55, T's performed second with a mean GPA of 68.22, and A's performed third with a mean GPA of 67.78. These means for whole triplet subgroups did not prove to be statistically significant by either analysis of variance or covariance.

Table 38

Frequency Distribution of GPA Term 5
All Students Retained

GPA	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
up to 49.9	11	19	8	11	8	12
50.0- 59.9	3	24	6	19	9	25
60.0- 64.9	5	33	9	32	6	34
65.0- 69.9	4	40	9	44	11	50
70.0- 74.9	13	62	15	64	12	68
75.0- 79.9	8	76	8	75	13	87
80.0- 84.9	12	97	12	92	3	91
85.0- 89.9	2	100	3	96	4	97
90.0-100.	0	100	3	100	2	100
N=	58		73		68	
Mean=	67.87		69.13		67.30	

Table 38, Frequency Distribution of Grade Point Average Term 5 - All Students Retained, shows the same pattern of group performance as the triplets.

Pass/Taken Ratio

The Pass/Taken Ratio also showed no statistically significant differences. In the whole triplet subgroups, the V's did best, .77; A's second best, .74; and the T's third, .73.

Table 39

Frequency Distribution of Pass/Taken Ratio Term 5
All Students Retained

Pass/ Taken Ratio	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0- .25	10	17	9	12	8	12
.26- .50	5	26	8	23	8	24
.51- .75	8	40	10	37	10	38
.76-1.00	35	100	46	52	42	100
N=	58		73		68	
Mean=	.71		.75		.73	

In Table 39, the Frequency Distribution of Pass/Taken Ratio - All Students Retained, the pattern is repeated.

Attendance

While no statistically significant differences in mean days absent for whole triplet subgroups was found, the V's were absent the fewest days, 9.59; the A's the greatest number of days, 21.06; and the T's fell between, 14.47 days.

Table 40

Frequency Distribution of Days Absent Term 5
All Students Retained

Days Absent	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0	5	9	4	5	4	6
1- 4	14	33	21	34	16	29
5- 9	15	59	18	59	11	46
10-19	11	78	22	89	22	78
20-29	4	84	3	93	7	88
30-39	5	93	0	93	0	88
40 or More	4	100	5	100	8	100
N=	58		73		68	
Mean=	15.02		11.96		17.44	

Table 40 shows the frequency distribution of days absent in term 5 for all students retained. In this distribution, the V's continue to have the fewest days absent but the T's now show better attendance than the A's.

Punctuality

Analysis of variance showed statistical significance in the mean number of days late for the whole triplet subgroup in term 5. As in previous terms, the T's and A's were similar with 4.97 and 4.16 days late respectively, while the V's were late an average of 14.22 days. (F=6.45, df=2/93, p=.002).

Table 41

Analysis of Covariance Summary Table for Days Late Term 5
Whole Triplet Subgroups

Source	Sum of Squares	Degrees of Freedom	Mean of Squares	F Ratio	Signif. of F Ratio
Days Late JHS	20.42	1	20.42		
Days Late Term 5	1,980.73	2	990.37	6.32	0.003
Error	14,423.12	92	156.77		
TOTAL	16,424.27	95	172.89		

Analysis of covariance, controlling for previous lateness with IS/JHS days late, also reached statistical significance as shown in Table 41.

Table 42

Frequency Distribution of Days Late Term 5
All Students Retained

Days Late	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0	29	50	12	16	33	49
1- 4	12	71	22	47	16	73
5- 9	5	79	18	71	4	79
10-19	5	88	11	86	8	91
20-29	2	91	7	96	3	96
30-39	3	97	0	96	0	96
40 or More	2	100	3	100	3	100
N=	58		73		67	
Mean=	6.09		9.63		6.00	

The frequency distribution of days late for all students shows a pattern of similarity between the T's and A's as opposed to the V's. This is detailed in Table 42.

Summary of Retention and Performance - 5 Terms

In June 1976, the 297 students of the study graduated from their intermediate/junior high schools and were scheduled to enter New York City high schools. Two-and-a-half years later, one-third of these students were no longer in high school. Only 55.2 percent were in the same high school they had entered.

Table 43

Frequency Distribution of Two-and-a-Half Years' Retention of All Triplets

	Destination	Targets N=99	Voc. Con. N=99	Ac. Con. N=99
Not Retained	Dropped Out	24	16	18
	Moved NYC	10	7	6
	Alt. HS	7	3	7
Cum. % Not Retained		41.4	26.3	31.3
Retained	Moved to VHS	2[a]	0[c]	1[e]
	Moved to A/C HS	10[b]	15[d]	7[f]
	Same School	46	58	60
% Retained in Original School		46.5	58.5	60.7
Cum. % retained in N.Y.C. Public H.S.		58.5	73.7	68.7

a. One additional subject moved to a vocational high school and later dropped out.
b. One of these students moved twice.
c. One additional subject moved to another vocational high school, then dropped out.
d. Three additional students moved to another vocational high school, then dropped out.
e. One additional student moved to a vocational high school, then dropped out.
f. One of these students moved twice.

As hypothesized, the Targets (those students who were not admitted to a vocational high school), dropped out at a higher rate and earlier than either the Vocational or the Academic Controls. By the end of five terms, only 58.5 percent of the Targets were retained as contrasted with 68.7 percent of the Academic Controls, and 73.7 percent of the Vocational Controls. Table 43, Frequency Distribution of Two-and-a-Half-Years' Retention of All Triplets, details the destination of those not retained as well as interschool movement of those retained.

Targets had the highest dropout rate in term 1. The rate gradually lessened in the next two years. There were 24 Target dropouts in term 1, and 6 in term 5.

The highest period of attrition of Vocational Controls was later in high school. There were 17 V dropouts in term 5, as compared to none in term 1. Vocational Controls had 18 inter-high school transfers, the greatest number for any of the three subgroups.

Academic Controls had less dramatic changes. Their lowest dropout rate was in term 4, with an attrition of 6 students, as opposed to their highest period, term 5, in which 11 students dropped out.

SUMMARY OF RETENTION AND PERFORMANCE - 5 TERMS

In the Summary of Performance which follows, cumulative measures of each behavior are presented and discussed for the subgroups of whole triplets and then for all subjects retained for five terms. It may be noted that there were 32 whole triplet sets remaining in the cumulative analysis, the pattern of attrition having reduced them from the original 99.

Performance Triplets and All Students Retained

Cumulative Grade Point Average

The cumulative GPA means for whole triplet subgroups was 67.94 for Targets, 71.98 for Vocational Controls and 67.98 for Academic Controls. While this difference was not statistically significant it does conform to the pattern of performance generally seen for those students retained. The Vocational Controls performed highest, followed by the Targets and then the Academic Controls.

Table 44

Frequency Distribution of Cumulative GPA
All Students Retained 5 Terms

GPA	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
up to 49.9	4	7	3	4	5	7
50.0- 59.9	8	21	8	15	12	25
60.0- 64.9	5	29	11	30	8	37
65.0- 69.9	15	58	13	48	18	63
70.0- 74.9	13	78	14	67	9	76
75.0- 79.9	6	88	12	84	9	90
80.0- 84.9	5	97	9	96	4	96
85.0- 89.9	2	100	2	99	1	97
90.0-100.	0	100	1	100	2	100
N=	58		73		68	
Mean=	68.01		70.12		67.39	

The Frequency Distribution of Cumulative GPA for All Students Retained Five Terms, Table 44, shows the same rank order of mean achievement, but is not statistically significant.

There is no clear pattern of high or low performance peaks for each of the subgroups. The low point for the Targets was term 1 and the high point term 5. However, term 1 GPA is reduced by the grades of those who subsequently drop out. In addition, the terms in between do not seem to follow a pattern.

The Academic Controls also have term 1 as the lowest and term 5 as the highest, again with some fluctuation in the intervening periods. The Vocational Controls are lowest in term 4 and highest in term 1.

Cumulative Pass/Taken Ratio

The Cumulative Pass/Taken Ratio for whole triplet subgroup shows a slightly different pattern from GPA. The V's had a ratio of .77, the A's a ratio of .74, and the T's a ratio of .73. Neither an analysis of variance nor of covariance showed this to be statistically significant.

Table 45

Frequency Distribution of Cumulative Pass/Taken Ratio
All Students Retained - 5 terms

Pass/ Taken Ratio	Targets Freq.	Targets Cum. Pct.	Vocational Controls Freq.	Vocational Controls Cum. Pct.	Academic Controls Freq.	Academic Controls Cum. Pct.
0-.25	3	5	2	3	4	6
.26-.50	9	21	4	8	8	10
.51-.75	7	33	21	37	18	44
.76-1.00	39	100	46	100	38	100
N=	58		73		68	
Mean=	.74		.78		.72	

When the cumulative PTR means were examined for all students retained, in Table 45, the order of performance was restored to V, T, A.

The Targets performed best in terms 2 and 5, weakest in terms 1 and 3. This does not seem to offer an interpretable pattern. The V's were strongest in terms 1 and 5 and weakest in term 2. The high point for the A's was term 5 which was quite a bit higher (.74) than their low point in term 1 (.57).

Cumulative Attendance

The number of days absent was summed for each student retained two-and-a-half years. A mean for each subgroup was computed by dividing the sum by the number of students. For the whole triplet subgroups, the V's were absent least, 36.55 days. The T's were absent 56.76 days and the A's were absent 78.13 days.

Table 46

Analysis of Covariance Summary Table
for Cumulative Days Absent - Triplets

Source	Sum of Squares	Degrees of Freedom	Mean of Squares	F Ratio	Signif. of F Ratio
Days Abs JHS	341.17	1	341.17		
Days Abs Overall	23,803.37	2	12,901.68	3.306	0.041
Error	327,805.94	84	3,902.45		
TOTAL	353,950.50	87	4,068.40		

Analysis of variance showed the difference in the means to be statistically significant. ($F=3.48$, $df=2/87$, $p=0.035$). Analysis of covariance, using IS/JHS days absent as a control, was also significant, and is summarized in Table 46 above.

Table 47

Frequency Distribution of Cumulative Days Absent
All Students Retained 5 Terms

Days Absent	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0- 9	3	6	8	12	4	6
10- 19	10	25	12	30	8	19
20- 29	8	40	10	45	10	35
30- 39	5	49	12	64	8	48
40- 49	3	55	4	70	6	58
50- 59	2	58	6	79	6	68
60- 69	5	68	3	83	1	69
70- 79	2	72	2	86	4	76
80- 89	4	79	1	88	2	79
90- 99	3	85	0	88	2	82
100-124	2	89	2	91	1	84
125-149	5	98	3	95	1	85
150-199	1	100	1	97	3	90
200 +	0	100	2	100	6	100
N=	53		66		62	
Mean=	56.42		45.67		68.95	

The frequency distribution, Table 47, of cumulative days absent for all students retained two-and-a-half years, shows the same pattern of behavior as the analysis of whole triplets.

The Targets were absent the fewest days in term 1 and the most days in term 5. This seems to contradict their pattern of grade performance which was highest in term 5 and lowest in term 1. The Vocational Controls had generally high attendance, an average of fewer than 10 days absent per term, in terms 1, 3 and 5. In term 4, their attendance was markedly lower, with 17.33 days absent. The Academic Controls had their fewest days absent in term 1 and their most in term 5. This is again unexpected in light of their high grade performance in term 5 and low performance in term 1.

Cumulative Punctuality

The number of days cumulatively late was computed in the same manner as number of days absent. The Targets were late the fewest number of times, 21.46. The Academic Controls were late an average of 26.03 times, and the Vocational Controls were late an average of 55.10 times. Analysis of variance showed this to be statistically significant. ($F=4.98$, $df=2/85$, $p=.009$).

Table 48

Analysis of Covariance
Summary Table for Cumulative Days Late
Triplets

Source	Sum of Squares	Degrees of Freedom	Mean of Squares	F Ratio	Signif. of F Ratio
Days Late JHS	91.03	1	91.03		
Days Late Overall	20,749.00	2	10,374.50	5.14	0.008
Error	169,487.06	84	2,017.70		
Total	190,327.13	87	2,187.67		

Analysis of covariance confirmed the statistical significance of the difference, controlling for variance contributed by the students' pre-high school performance on this variable.

Table 49

Frequency Distribution of Cumulative Days Late
All Students Retained 5 Terms

Days Late	Targets		Vocational Controls		Academic Controls	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
0- 9	22	43	11	17	28	48
10- 19	13	69	10	32	6	59
20- 29	4	76	10	47	9	74
30- 39	2	80	7	48	0	74
40- 49	3	86	8	59	1	76
50- 59	0	86	3	74	3	81
60- 69	1	88	5	82	1	83
70- 79	0	88	3	86	0	83
80- 89	1	90	2	89	4	90
90- 99	1	92	0	89	0	90
100-124	1	94	2	92	1	91
125-149	0	94	1	94	2	95
150-199	2	98	2	97	2	98
200 +	1	100	2	100	1	100
N=	51		66		58	
Mean=	28.45		46.64		33.17	

The frequency distribution of days late, Table 49, shows the same pattern of performance for all students retained two-and-a-half years.

The Targets were late least frequently in term 4 and most frequently in terms 1 and 2. The Academic Controls had their best punctuality in term 5 and their poorest punctuality in term 1. The punctuality pattern of the Vocational Controls is the reverse of these two, with term 1 being best and term 5 poorest.

Table 50

Data Summary
From IS/JHS Through High School

Performance Means, ANOVA*, ANCOVA**, Adjusted Means
by Whole Triplet Groups

Whole Triplets Remaining	IS/JHS N=99	Term 1 N=77	Term 2 N=57	Term 3 N=51	Term 4 N=44	Term 5 N=32	Cumulative N=32
GPA							
Group T	75.83	64.43	66.87	64.99	65.37	68.22	67.94
Group V	75.38	69.83	68.93	68.92	65.91	69.55	71.98
Group A	73.83	62.73	64.19	64.80	63.42	67.78	67.98
ANOVA Sign. F	N.S.	.002	N.S.	N.S.	N.S.	N.S.	N.S.
ANCOVA Sign. F		.006	N.S.	N.S.	N.S.	N.S.	N.S.
Adj. Mean T		65.27					
Adj. Mean V		69.05					
Adj. Mean A		62.86					
PTR							
Group T	.84	.65	.73	.65	.70	.73	.74
Group V	.90	.77	.73	.75	.68	.77	.82
Group A	.86	.57	.63	.62	.64	.74	.73
ANOVA Sign. F	N.S.	.005	N.S.	N.S.	N.S.	N.S.	N.S.
ANCOVA Sign. F		.000	N.S.	N.S.	N.S.	N.S.	N.S.
Adj. Mean T		.56					
Adj. Mean V		.76					
Adj. Mean A		.56					

*ANOVA - Analysis of variance
**ANCOVA - Analysis of covariance

Table 50 (cont'd) - Whole Triplets

Whole Triplets Remaining	IS/JHS N=99	Term 1 N=77	Term 2 N=57	Term 3 N=51	Term 4 N=44	Term 5 N=32	Cumulative N=32
Days Abs.							
Group T	18.86	13.75	13.69	12.92	15.91	14.47	56.76
Group V	15.60	9.06	12.93	9.43	17.33	9.59	36.54
Group A	17.71	16.01	18.63	18.22	20.32	21.06	78.14
ANOVA Sign. F	N.S.	.020	N.S.	.051	N.S.	N.S.	.035
ANCOVA Sign. F		.043	N.S.	N.S.	N.S.	N.S.	.041
Adj. Mean T		13.57					55.24
Adj. Mean V		9.36					36.62
Adj. Mean A		15.86					78.25
Days Late							
Group T	15.81	6.76	6.55	5.38	3.17	4.97	21.46
Group V	17.79	7.05	10.39	11.14	9.60	14.22	55.10
Group A	17.36	8.36	6.83	6.08	5.14	4.16	26.03
ANOVA Sign. F	N.S.	N.S.	N.S.	.040	.005	.002	.009
ANCOVA Sign. F		N.S.	N.S.	.030	.004	.003	.000
Adj. Mean T				.527	3.15	3.63	20.80
Adj. Mean V				10.89	9.76	14.20	55.65
Adj. Mean A				5.70	4.99	4.15	26.10

Data Summary

Table 50, above, summarizes the data presented on triplet sets which remained complete throughout the two-and-a-half years. Performance for IS/JHS, each term, and the cumulative two-and-a-half year periods is given.

EFFECTS OF RECEIVING OCCUPATIONAL TRAINING IN OTHER THAN A VOCATIONAL HIGH SCHOOL

This section explores the data on how many students in the Target and Academic Control groups received occupational training.

The data are looked at from several points of view:

- How many students received occupational training each term in any of the five areas listed in the IS/JHS Survey of Choices?
- How many students received occupational training in the area they had identified as their area of interest in the IS/JHS Survey of Choices?
- How many terms of this training did they receive?
- How many students received occupational training in an area in which they did not express interest in the IS/JHS Survey of Choices?
- Is there any difference in the retention and performance of students who received occupational training in the area of interest they expressed, students who received training in another occupational area and students who received no occupational training?

The five areas of interest are clerical or business, mechanics or construction, service to others, agriculture and the arts. For purposes of this study, occupational training was defined as more than one class per semester and/or more than one semester of a subject falling into one of the categories above. (It should be noted that this does not meet with the State Education Department definition of vocational education, which requires a minimum of two periods per day in a recognized job cluster area.)

Training Received by Occupational Area

Table 51 shows the number of Targets and Academic Controls who received training each term in any one of the five areas. This table does not detail whether or not the same student is receiving training over several terms. It should be read only as an indicator of institutional activity. Subsequent sections will deal with the data by individual student.

Table 51

Number of Students Receiving Training
Each Term by Occupational Area

	Term 1		Term 2		Term 3		Term 4		Term 5	
	T'S	A'S	T'S	A'S	T'S	A'S	T'S	A'S	T'S	A'S
Clerical/Business	4	5	10	8	23	17	29	21	18	20
Mechanics/Construction	1	0	2	2	0	0	3	3	0	0
Service to Others	2	1	3	5	1	2	3	3	3	3
Agriculture	0	0	0	0	0	0	0	0	0	0
The Arts	0	0	2	3	1	1	2	3	1	1
All Fields TOTAL	7	6	17	18	25	20	37	30	22	24
Number in School Not Receiving Training	74	83	56	67	42	61	25	46	36	44

T'S = Targets
A'S = Academic Controls

Training Received by Expressed Interest

Summary

The occupational training area of all T's and A's who received any training was compared to the area in which interest was expressed on the IS/JHS Survey of Choices.

For the Targets, five students had one term of training in the expressed area of interest, six had two terms of training in the expressed area of interest, eight had three terms in the expressed area of interest, one had four terms of training and one had five. Thus, 21 students denied admission to vocational high schools received occupational or practical arts training in the area of interest. Of the 21, only one student dropped out.

An additional six Targets received one term of training and 14 Targets received two or more terms of training in occupational areas other than those in which interest had been expressed on the IS/JHS Survey of Choices. Of these 20, only two dropped out. Therefore, out of the 24 Target dropouts in terms 1-5, only three had had some form of occupational or practical arts training.

Of the Academic Controls, six had one term of training in the area in which interest had been expressed, two had two terms of training, one had three terms of training, two had four terms of training, and one had five terms. Of the total of 12 students who received occupational training in the area of interest expressed, one dropped out.

An additional 26 Academic Controls received training in an area other than the one in which interest had been expressed. Nine of these had one term of training and 17 had two or more terms. Of these 26, only one dropped out. Out of the 18 Academic Controls who dropped out in terms 1-5, only two of these had had any kind of occupational or practical arts training.

Performance Differences

Two measures of performance differences were used: retention, and GPA in the fifth term. The term 5 GPA (not cumulative) was selected because all terms of occupational or practical arts training would thereby be included and students have generally "hit their stride" by the fifth term.

Retention

For the Targets, the overall retention rate by Term 5 was 58.6 percent. For those Targets who received any occupational training, the retention rate was 92.7 percent. Only three Targets of the 41 receiving occupational or practical arts training dropped out.

Results are similar for the Academic Controls; the overall retention rate by term 5 was 68.7 percent. For those who received occupational or practical arts training, 94.9 was the retention rate. Only two of the 37 Academic Controls receiving training dropped out.

CONCLUSION

ANY KIND OF OCCUPATIONAL OR PRACTICAL ARTS TRAINING APPEARED TO INCREASE RETENTION.

Grade Point Average

Table 52

Term 5 GPA
Occupational Training Received

	Rec'd Trng. Area of Choice		Rec'd Trng. Not Area of Choice		Rec'd No Trng.		All Subj. Retained	
	N	GPA	N	GPA	N	GPA	N	GPA
T	20	74.13	19	66.14	19	62.6	58	67.87
Ac.Con.	11	72.64	26	69.86	31	63.15	68	67.30

Term 5 GPA was compared for three groups of Targets: those who had received training in the area of interest expressed in the IS/JHS Survey of Choices, those who had received training in another occupational area and those who had received no occupational training. The results, depicted in Table 52 above, show highest GPA's for those who received occupational training in their area of choice.

Term 5 GPA was compared in the same way for three groups of Academic Controls. Again, those who received training in their area of choice were highest in subject grade averages and those with no training lowest. Although no tests of statistical significance were performed, a difference of almost 12 points on the means of the 5-term averages between the Targets who had received some desired training (74.13 percent) and those who did not (62.6 percent) can be judged highly.

Although no tests of statistical significance were performed, the resulting differences in the means (a 12-point spread between Targets who had received desired training and those who had none; an 11-point spread between Academic Controls who had received desired training and those who had none) appear meaningful particularly when coupled with the retention pattern outlined earlier in this chapter.

THE POSTSECONDARY CAREER CHOICE SURVEY

In June 1979, all students retained in high school were mailed the Career Choice Survey. The Career Choice Survey is a mailable revision of the "Attitude Scale" of the Career Maturity Inventory (CMI). The Attitude Scale "elicits the feelings, the subjective reactions and the dispositions that the individual has toward making a career choice and entering the world of work" (Crites, 1973). In addition to the Attitude Scale, the Career Choice Survey asked students about occupational training received while in high school and about immediate plans upon high school graduation (see Appendix G).

One hundred ninety-nine subjects were mailed the questionnaire. Of these, 58 were Targets, 72 Vocational Controls and 69 Academic Controls. The overall response rate was 46.2 percent with 25 T's responding, 32 V's and 35 A's.

Results of the Career Maturity Index

The Career Maturity Index yields a raw score of zero to fifty. The scale was designed for high school students, having been scaled on 12th graders. Studies "confirm that the Attitude Scale is equally applicable to males and females" (Crites, 1973).

Use of the Attitude Scale has shown that the most appropriate criterion group for norming is the local group. This is particularly true in this use of the scale since none of the general testing conditions applied. That is, the Attitude Scale is generally administered in a class or small group setting, using separate answer sheets and booklets. The explanation and directions are read aloud, with an opportunity for questions. For this administration, a new format was created for mailing with space for the answers alongside the questions. In addition, all directions were written, and there was no opportunity for questions.

All 92 respondents to the Survey responded to the Attitude Scale. There were, therefore, 25 T's, 32 V's and 35 A's. The means showed little difference among the three subgroups. The Targets scored 33.64, the Vocational Controls 32.16 and the Academic Controls 31.60 percent.

The results of the Attitude Scale of the CMI seem to indicate that the high school experience of the three subgroups had little or no difference in effect on this aspect of career development.

Extracurricular Occupational Training

A set of questions on the survey dealt with students' receiving occupational training after school or on the weekend.

Of the 25 Targets, seven responded that they had received training in a free program, one in a private trade school. For three of these, the area of occupational training corresponded to the area of interest expressed in the IS/JHS Survey of Choices. The students identified the areas as follows: three in clerical or business, three in mechanics or construction, 0 in service to others, 0 in agriculture and two in the arts.

Of the 32 Vocational Controls, six responded that they had had occupational or practical arts training in a free program after school or on the weekend, none in a private trade school. Of these, three had training in the area of interest expressed in the Survey of Choices. The areas were as follows: four in clerical or business; 0 in mechanics or construction; one in service to others; 0 in agriculture; 0 in the arts and one in several areas.

Of the Academic Controls, six responded that they had had training, all in a free program. One was trained in the area of interest expressed in the IS/JHS Survey of Choices. The areas were as follows: five in clerical or business; one service to others; and 0 in mechanics or construction; agriculture and the arts.

Because the number of responses being analyzed is low, it is impossible to draw firm conclusions. However, it might be noted that the number of Targets who received some form of free training after school or on weekends is essentially the same as the number of Vocational Controls receiving this training. In the initial IS/JHS Survey of Choices, 96 percent of the Targets indicated an occupational area in which they wanted occupational training while in high school. Of those surveyed, only 32 percent were able to receive any training outside their high school programs. Of the seven Targets who received occupational training outside their high school, six had also received training within high school. THEREFORE ONLY ONE TARGET STUDENT FOUND AN ALTERNATIVE MEANS OF OBTAINING OCCUPATIONAL TRAINING.

Postsecondary Plans

All of the respondents planned to graduate from high school, or had graduated. However, five students (three V's and two A's) planned to earn High School Equivalency Diplomas (GED's) rather than follow the traditional route through high school.

Most students in all three subgroups intended to pursue further education. Of the T's, 75 percent planned to go on, with more than half planning to attend full-time four-year colleges. Of the V's, 86 percent planned to continue, with approximately one-third planning to attend full-time four-year colleges, one-third planning to attend two-year colleges, one-third planning to go to school and work. Of the A's, 80 percent planned to pursue their education, 39 percent planned to attend two-year colleges, and one-third planned to both work and go to school.

THE DROPOUTS

The students who had been identified as dropouts - those not retained in the New York City public high school system - were sent a survey in June 1979. The goal of the survey was to determine their work and occupational training activities since leaving high school, in particular, to see if there was a relationship between what they had done and their expressed area of interest in the IS/JHS Survey of Choices. (See Appendix H: Job Training Survey).

A description of the dropouts from this study population is presented as background information.

Background

In all, 98 of the original students had left the public school system by the end of the study. Of these, 41 had been Targets, 31 Academic Controls, and 26 Vocational Controls. In term 1, 24 students left; in term 2, 21 left; in term 3, 15 left; in term 4, 12 left; and in term 5, 26 left. In general, the Targets dropped out early in their high school careers and the

Vocational Controls later. Sixty-one percent of the Targets who dropped out did so by the end of the first year. Only 23 percent of the Vocational Controls had left by the end of the first year. In fact, 54.9 percent of the Vocational Control dropouts remained in high school for two years before dropping out.

An examination of IS/JHS performance indicators of GPA, attendance, and punctuality was made to see if any differences had been discernable at particular points. The measures were examined for those who dropped out in year 1 versus those who never dropped out; for those who dropped out in year 2 versus those who never dropped out; and those who dropped out in any term versus those who never dropped out.

Table 53

GPA IS/JHS Performance
Dropouts vs. Retained Students

	N	Mean	SD	t	df	Signif. of t
Dropped Yr. 1 vs. Never						
Dropped	47	71.50	12.01			
Retained	199	75.68	10.23			
				-2.20	62.71	0.031
Dropped After Yr. 1 vs. Never						
Dropped	51	69.83	11.22			
Retained	199	75.68	10.23			
				-3.38	72.74	0.001
Dropped Any Time vs. Never						
Dropped	98	70.63	11.58			
Retained	199	75.68	10.23			
				-3.67	173.44	0.000

A test of means was performed to determine the significance of difference. For all three comparisons, the differences in IS/JHS performance are statistically significant on the measure of GPA as presented in Table 53. It is interesting to note that the performance in IS/JHS was somewhat lower for students dropping out later than for those who dropped out earlier. There were no significant differences found in attendance or punctuality.

Table 54

Frequency Distribution of IS/JHS GPA
by Dropouts Year 1, Dropouts After Year 1
and Retained Students

	Dropout Yr. 1		Dropout After Yr. 1		Retained Students	
	Freq.	Cum. Pct.	Freq.	Cum. Pct.	Freq.	Cum. Pct.
up to 50.0	1	2	2	4	1	1
50.0- 59.9	7	17	5	14	12	7
60.0- 64.9	8	34	9	31	13	13
65.0- 69.9	7	49	9	49	27	27
70.0- 74.9	7	64	10	69	37	45
75.0- 79.9	5	74	5	78	34	62
80.0- 84.9	3	81	5	88	34	79
85.0- 89.9	3	87	4	96	22	90
90.0-100	6	100	2	100	19	100
N=	47		51		199	
Mean=	71.5		69.83		75.68	

The frequency distributions of IS/JHS GPA for dropouts in year 1, dropouts after year 1, and retained students (Table 54) do not reveal as clear a pattern as one might expect from the significant differences in the means. While the dropouts, as a group, performed poorly in IS/JHS, individual dropouts did very well and conversely some students who achieved five terms of high school had very poor IS/JHS grades. It should be remembered that the group of dropouts includes, by definition, those students who left a New York City public high school for any reason except graduation or transfer to another New York City public high school. (See Definitions p. 6.)

Job Training Survey

The response rate on the Job Training Survey was lower than that on the Career Survey, with 25.5 percent responding. This had been anticipated because of the large number of dropouts in "not found" categories. The respondents were: six Targets, nine Academic Controls and ten Vocational Controls. Because of the small numbers, no meaningful statistical analyses could be performed. However, the data are presented as a matter of interest.

The first questions dealt with students' receiving occupational training after school or on the weekends while in high school. Three students responded positively. All three had been trained in the clerical or business area. (This was the same first question asked of the retained students on the Career Choice Survey.) Of the retained students 32 percent had received extracurricular training; 12 percent of these respondents had some training while in high school.

Table 55

Report of Post High School Activities
by Students Not Retained

Activity	Targets	Vocational Controls	Academic Controls
Attending Alternative or Private H.S. in NYC	3	1	2
Attending School Outside NYC	0	0	0
Preparing for H.S. Equivalency	0	3	2
Attending Trade School	0	0	1
Working	0	3	3
Looking for a Job	3	2	2

The next set of questions dealt with the respondents' current occupational and educational activities. The number of students reporting each activity is presented in Table 55, and no inferences may be drawn because of the low number of respondents.

The final set of questions dealt with the respondents' present desire for job training. Of the group responding, 84 percent identified the same general area of occupational interest as they had identified in the IS/JHS Survey of Choices.* Fourteen of the respondents gave usable responses to the question of the occupational area in which they would now like training: five preferred clerical or business; six preferred mechanics or construction; two preferred service to others; one preferred the arts; and none preferred agriculture.

*Subjects were not asked to remember their earlier response. The response to the question on this survey was compared to the equivalent response on the previous survey.

SUMMARY AND RECOMMENDATIONS

Summary of Statistically Significant Findings in Relation to Research Question Categories Investigated

Findings reported below are related to the specific questions stated on pages 2-3 of this report, and follow in the same order.

A - Findings Related to the Effects on Student Perceptions of High School Admissions

- Students denied admission to a vocational high school (Targets) were much more disinterested-disaffected as measured by "don't know" responses in June, in regard to: high school application made, acceptance status and the high school they would be attending in September (p. 20-21).

B - Findings Related to the Effect on High School Performance - First Term

- Eighteen out of 99 Target triplets dropped out; six Academic students and no Vocational students dropped out.
- In the first term of high school, Vocational students were superior to the Target and Academic students in grade point average, ratio of subjects passed to subjects taken, and fewest days absent.
- When previous junior high or intermediate school senior year attendance rates were taken into account, Vocational students had fewer days absent in term 1 of high school. Academic students had the worst attendance (p. 29).
- In the first term of high school, the groups did not differ significantly in punctuality (p. 30).

C - Findings Related to High School Performance - Fifth Term

- In the fifth term, the dropout rate for those remaining Vocational students increased significantly (p. 42).
- Grade Point Average did not differ significantly for the three student groups (p. 43).
- Subjects Taken/Subjects Passed Ratios did not differ significantly among the three groups (p. 44).
- Vocational students were absent the fewest days of the three groups, although the difference was not statistically significant (p. 45).
- Vocational students were significantly higher in average number times late than the other student groups (p. 46).

D - Findings Related to High School Performance Cumulatively, Over All Five Terms

- One-third of all the original 297 students matched in triplet groups had dropped out (p. 47).

- Retention rates among the student groups were significantly different as follows: 73.7 percent of the Vocational students, 68.7 percent of the Academic students, and only 58.5 percent of those whose applied to a vocational high school and were not admitted were still in school (p. 47).

- While the Vocational students consistently had higher grade point averages during several of the five terms over the Targets and Academic Controls, when averaged for the full five terms, differences among the three groups were not statistically significant. The pattern of superior performance by the Vocational Controls was maintained. This held true for both the matched triplets and the general population of students in each group as a whole (p. 48).

- There were no clear high or low performance peaks over the five terms for any of the groups (p. 49).

- The differences between the cumulative ratios of the subjects taken to subjects passed were not statistically significant among the three groups, although the Vocational students, both in triplets and the whole groups, consistently ranked higher (p. 49).

- Within the triplet groups, Vocational students had the lowest absence averages (36.5), Targets had 56.7, while Academic students averaged 78 days of absence over the five terms. These differences are significant statistically (p. 50).

- The Targets had the highest grade point averages in the terms (1 and 5) in which they had the greatest averages of days absent (p. 26, 44, 50).

- Targets had the lowest averages of days late, Academic students were second, while Vocational students had the worst punctuality records. Differences were significant statistically with and without any differences included in the last year of IS/JHS controlled (p. 52).

E - Differences Between Targets Who Had at Least One Term, Five Periods per Week of Study in Any Practical Arts or Vocational Training, and Those Who Did Not

The courses were grouped into the categories of clerical and business, mechanics and construction, service to others, agriculture and the arts (production - not appreciation).

- For all 58 Target students who remained in the study over the 5-term period, 22 had sought and received some form of vocational or practical arts training as defined above, in the area of interest they indicated on the IS/JHS survey (p. 56). Of these 22 students only one had dropped out (p. 57).

- An additional 6 Targets received 1 term of training and 14 received two or more terms of training in a field in which they had not expressed interest. Of these 20 students, only two dropped out (p. 57).

- For all the 99 Targets, the retention rate by term 5 was 58.6 percent. For the Targets who had received any kind of vocational or practical arts training for one or more terms, the retention rate was 92.7 percent (p. 57).

- o Cumulative grade point averages over five terms were:
  - (a) 74 for Targets who received training in the area of their interest;
  - (b) 66 for Targets who received training in areas other than their original expressed interest; and
  - (c) 63 for Targets who received no training at all.

The above differences between (a) and (b), compared to (c), are considered more critical when the passing grade is 65 (p. 58).

F- The Postsecondary Career Choice Survey Results

- o There were no significant differences on career maturity among the three groups as measured by the Career Choice Survey (p. 59).
- o Questionnaire responses from students who had received occupational training outside of the regular high school day were too few (seven) to analyze statistically; results would be confounded by students' having received training both inside and outside of their nonvocational high schools. However, only one target student out of the seven had training by an alternate out-of-school means (p. 60).
- o At least 75 percent of the students who had completed 5 terms of high school planned to go on to postsecondary education (p. 60).
- o IS/JHS Grade Point Averages can predict dropping out in high school; the lower the average, the greater the chance of leaving (p. 61).
- o IS/JHS absence and punctuality averages cannot predict whether or not a student will drop out in high schools (all groups) (p. 62).

RECOMMENDATIONS BASED ON RESEARCH FINDINGS

1. The need for an intensive citywide orientation program, showing alternatives in obtaining vocational or practical arts training in high school, is shown by the high measure of disinterest and disaffection of students denied admission to a vocational high school. Their subsequent high dropout rate, absence and low grade point average in the first term of high school contrasts poorly with the first term high school performance data of students who were accepted to a vocational high school. This orientation could well be handled by a computer-based career information delivery system which links job information with high school course and high school descriptions and locations in each borough, and which would be shown to seniors (in junior high schools and intermediate schools) who were not accepted to vocational high schools. It is further recommended that this be in place for use in all three years, and be coordinated through the guidance counselors of the schools.

2. The unusually high dropout rate for vocational high school students in fifth term, within the triplets and general populations in the study, needs to be investigated from city-wide data to determine whether this phenomenon continued in 1980 and 1981. An analysis should be made of significant differences in dropout rates by students, by program, by age, sex and by vocational high school. Then an intensive study should be conducted to determine where the holding rates are the highest, and what program or other kinds of school factors might be associated with higher holding power.

3. The research finding that dropout rates are markedly reduced for students denied admission to vocational high schools, who nevertheless obtained some type of vocational or practical arts training in the academic high schools, is significant for development of a coordinated alternative program by the academic high schools. It is recommended that a joint steering committee composed of vocational and academic high school staff in the borough and region develop a coordinated program which would:

   A. Provide for the systematic identification of target students before the opening of school in September.

   B. Provide models of high school alternative programming including expansion of industrial arts and home economics, offering the availability of cooperative industrial programs, after-school training experiences, and making students aware of these alternatives on a regular systematic basis.

It is recommended that the new high school application procedures, developed in New York City since this study, be evaluated against the findings of the study using the same criteria to determine whether holding power and achievement were increased significantly for the students not admitted to vocational high schools. Study findings strikingly point to the need for a study of expanded alternative programs using the current facilities of the academic high schools and for examination of whether or not additional course sequences and grades in which subjects are taken are still relevant. The purpose of this would be to determine whether or not student involvement in alternative programs in ninth or tenth grades is a means of early intervention. The possibility of scheduling double period core subjects as well as a variety of multi-occupational coordinative explanations should be investigated as a means for increasing high school student retention rates.

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APPENDIX A
Intermediate/Junior High School Survey of Choices

BOARD OF EDUCATION OF THE CITY OF NEW YORK
DIVISION OF EDUCATIONAL PLANNING AND SUPPORT
CENTER FOR CAREER AND OCCUPATIONAL EDUCATION

PROJECT CATCH

LAST NAME (1–15)

FIRST NAME (16–25) MI (26)

DATE OF BIRTH MO DY YR (27–32)

OFFICIAL CLASS _____ (33–38)

BOY (1) GIRL (2) (39)

DO NOT WRITE BELOW THIS LINE

SCHOOL (40) STUDENT (41–44) CARD (45)

(46) (47) (48–54)

(55) (56) (57–61) (62)

(63–68) boro (69) school (70–72)

(73) (74) (75) (76–80)

1. Some people of your age have chosen their careers and feel very certain. Other young people change their minds frequently as they learn and think about careers. Still others really haven't made up their minds at all. Which sentence best describes you? (Check only one)

346

1) ___ I feel very sure I want to be a _____
(fill in name of occupation)

2) ___ I think I want to be a _____
(fill in name of occupation)

3) ___ I haven't really made up my mind yet.

2. How long do you plan to stay in school? (Check only one)

47.

1) ___ I plan to leave as soon as I can.

2) ___ I plan to finish high school.

3) ___ I plan to continue my schooling even after I finish high school.

3. All of the students in your grade recently filled out high school applications. Which of the following schools did your choose? (You may check more than one)

46.

1) ___ I applied to one or more Science or Talent schools (Stuyvesant, Bronx H. S. of Science, Brooklyn Tech, Music & Art)

2) ___ I applied to one or more Vocational High Schools and had to take a test.

3) ___ I applied to one or more Vocational High Schools that did not require a test.

4) ___ I applied to one or more Educational Options Porgrams in high schools outside of my zone.

5) ___ I applied to my zoned, neighborhood high school.

6) ___ I applied somewhere else _____
(Fill in name of High School)

54

7) ___ I am not sure.

95

4. People often have many reasons for things they do. Which of the following were reasons for your high school applications? (You may check more than one)

201

1) ___ I feel I can get a very good education there.
2) ___ I feel I can learn the occupation I want there.
3) ___ My friends or relatives go there.
4) ___ I don't know anyone there. I want a fresh start.
5) ___ It's my neighborhood high school.
6) ___ It's not my neighborhood high school.
7) ___ I just wanted to see if I could get in.

5. Which of these is the MOST IMPORTANT REASON for your high school application? (Check only one)

55

1) ___ I feel I can get a very good education there.
2) ___ I feel I can learn the occupation I want there.
3) ___ My friends or relatives go there.
4) ___ I don't know anyone there. I want a fresh start.
5) ___ It's my neighborhood high school.
6) ___ It's not my neighborhood high school.
7) ___ I just wanted to see if I could get in.

6. Who helped you decide where to apply? (You may check more than one)

202
1) ___ parents or other family members.
2) ___ friends.
3) ___ guidance counselor or grade advisor.
4) ___ a teacher.
5) ___ some other adult.
6) ___ no one.

7. Who gave you THE MOST HELP? (Check only one)

30
1) ___ parents or other family members.
2) ___ friends.
3) ___ guidance counselor or grade advisor.
4) ___ a teacher.
5) ___ some other adult.
6) ___ no one.

8. In school, where did you get information about high schools? (You may check more than one)

57
1) ___ from the High School Directory.
2) ___ from other printed material.
3) ___ in the classroom.
4) ___ in assembly programs.
61
5) ___ by talking to the counselor alone or with just a few other students.

9. Did you feel that you really knew what you were doing when you filled out your High School applications? (Check only one)

62
1) ___ I really knew what I was doing.
2) ___ I had some information, but it was confusing.
3) ___ I didn't have enough information to apply for what I wanted.

10. You now have the results of your high school applications.

Check the boxeor boxes that apply to you. (You may check more than one)

63

1) ___ I was accepted by a Science or Talent high school.

2) ___ I was accepted by one or more Vocational High Schools.

3) ___ I was accepted into one or more Educational Option Programs.

4) ___ I was accepted by some other high school _____
(fill in name)

5) ___ I was not accepted by any school except my zoned high school.

66 6) ___ I applied only to my zoned high school.

69 11. Which high school do you plan to attend?

72 _____
(Fill in name of one high school)

12. Why have you chosen this high school? (Check only one)

73

1) ___ I had no choice. That's where they're sending me.

2) ___ I feel I'll get a very good education there.

3) ___ It's not my first choice, but I think it will be okay.

13. Going from Junior High School to High School is a big step, and different people have different feelings. How do you feel? (Check only one)

74

1) ___ I can't wait to get started. I'm really looking forward to it.

2) ___ I think it will be okay, but I'm a little nervous.

3) ___ I wish I were going to a different high school.

4) ___ It doesn't matter.

14. Some of you will want to be able to start full time work right after high school graduation. Others will want part time work while going to college. You can learn to do some jobs while you are still in high school.

Listed below are 5 major job areas. You will see examples in each. Although you may not see the exact job you would like, check the kind of job that comes closest to your choice. REMEMBER, THIS IS FOR JOB TRAINING WHILE YOU ARE IN HIGH SCHOOL. (Check only one)

12

1) ___ CLERICAL OR BUSINESS (typing, filing, data processing, selling, clothing trades, etc.)

2) ___ MECHANICS OR CONSTRUCTION (auto, appliances, aviation, printing, carpentry, radio and t.v. repair, etc.)

3) ___ SERVICES TO PEOPLE (practical nursing, physician's aide, child care, food preparation, cosmetology, social work aide, etc.)

4) ___ AGRICULTURE (plant or animal care)

5) ___ THE ARTS (music, acting, writing, painting, photography, etc.)

6) ___ I do not want any skills training while in high school.

15. How do you think you can get the training you checked above? (You may check more than one)

16

1) ___ I could get it in a program in my high school.

2) ___ I could get it by going to a free Board of Education program after school.

3) ___ I could get it by going to my own high school in the morning and a different high school in the afternoon.

4) ___ I could get it by paying for it in a private school.

20

5) ___ I do not know at this time. I need more information.

THANK YOU AND GOOD LUCK IN HIGH SCHOOL.

APPENDIX B

QUESTIONS FOR DISTRICT SUPERVISORS OF GUIDANCE AND COUNSELORS

Person Interviewed _____ Position_____

District_____I.S._____, JHS_____

#Students 8th grade _____ # students 9th grade_____

1. When does counseling of students toward high school choices begin?

2. What kinds of activities are carried out?

Individual counseling
small groups
classroom guidance groups
curriculum infusion
assemblies
distribution of printed material
visits to schools
visits by representatives of schools

3. How are parents involved in the the process of choosing a high school?

4. How is the distribution of the High School Directory handled?

5. How are students informed about test dates?

6. How are students prepared for the tests for the Vocational High Schools?

7. Are students encouraged to make more than one choice?

8. Have you run into any problems with conflicting test dates?

9. How, and by whom, are students informed of acceptance/rejection into screened programs?

10. What are students told about the Educational Options?

11. Are students rejected by the screened programs encouraged to apply to unscreened programs?

12. Are students encouraged to complete choices 2 and 3 on the application?

Are they given help in the actual completion of it? By whom?

13. Do you use the priority number system on the applications?

14. What are your reactions to this system?

15. Is a student who failed an entrance examination generally given any preference over a student who did not take one of the entrance examinations?

16. How, and by whom, are students and parents notified that they cannot attend a vocational high school?

17. What problems have you encountered in this entire application process?

18. How are this year's guidance services, in this area, different from last year's?

19. How could I arrange to be present when some students are notified of their rejection or to interview some of these students later in the Spring?

APPENDIX C

Intermediate/Junior High School Survey Instructions

BOARD OF EDUCATION OF THE CITY OF NEW YORK
DIVISION OF EDUCATIONAL PLANNING AND SUPPORT
CENTER FOR CAREER AND OCCUPATIONAL EDUCATION

PROJECT CATCH

To the Counselor and Teachers of _____

We appreciate your cooperation in this study of Intermediate/Junior High School students' career interests and high school choices. The students we are surveying today will form a group to be followed up in high school.

The survey itself has the following objectives:

1. To assess students' motivations in their choice of high school.
2. To understand the students' views of guidance procedures.
3. To understand students' feelings about the high school which they will attend.
4. To assess student knowledge and awareness of available skills training programs.

If possible, please allow a full period for the survey. Return the completed forms to _____ by _____.

Directions: Distribute the questionnaires. Read the following to the students.

To the Student

This questionnaire is to help us see how students choose their high schools. Understanding your choices will enable us to plan programs for students like you in the future.

We are interested in your experiences and feelings. There are no right or wrong answers. If you don't understand the words in a question, raise your hand for help.

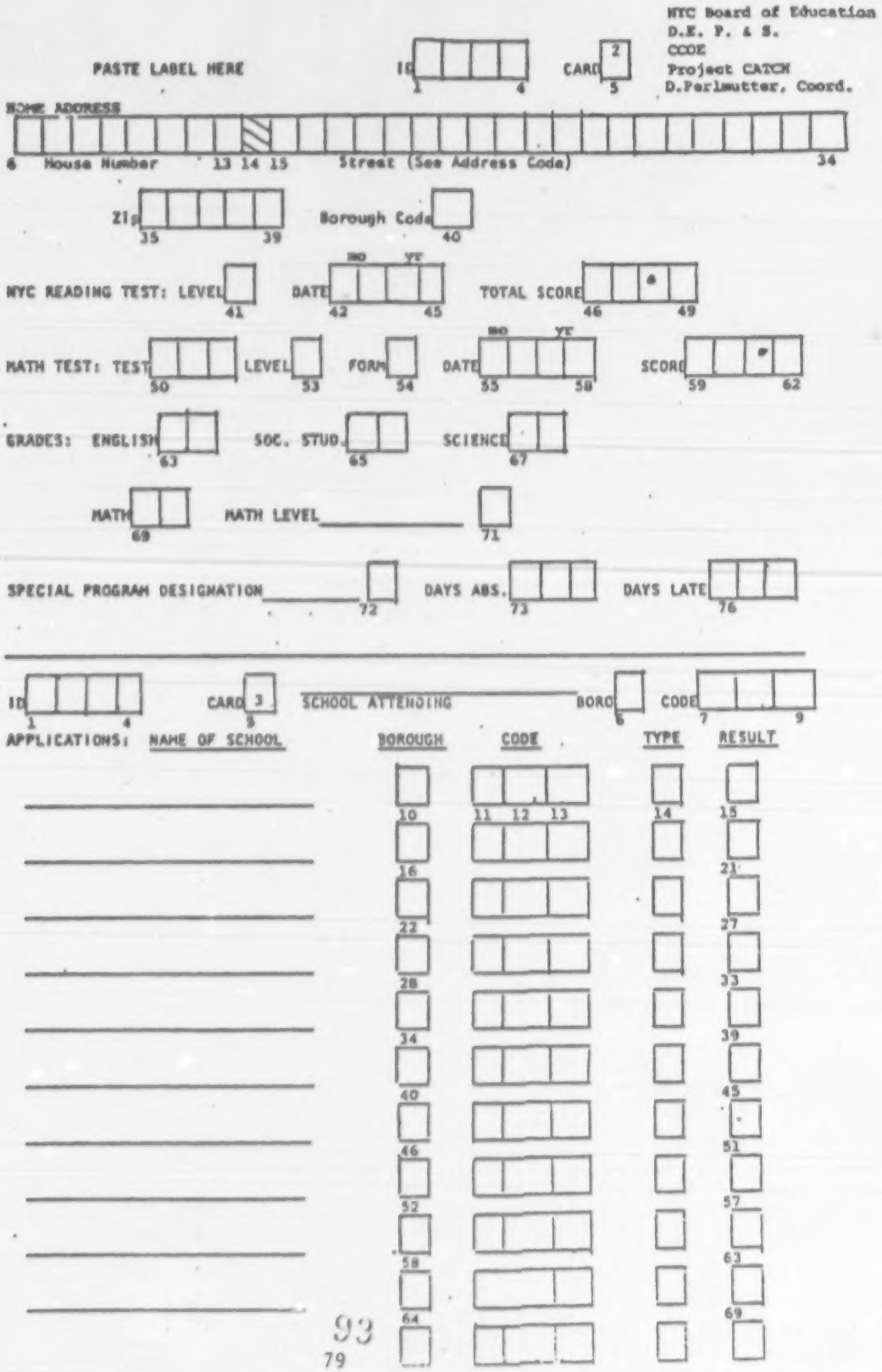
Now fill in the cover sheet. In the first line of boxes, print your last name, one letter to a box. (Pause) On the next line, print your first name. one letter to a box and put your middle initial in the box provided. (Pause) Where it says Date of Birth, use the first two boxes for the number of the month, the next two for the day, and the last two for the year. Print your official class on the line provided. If you are a boy, circle the word boy. Girls circle the word girl.

Please answer every question. Some questions call for only one answer. For some, you may give more than one answer. Be sure to follow the directions after each question.

Turn the page and begin work.

APPENDIX D

Intermediate/Junior High School Data Collection Instrument



APPENDIX E
High School Data Collection Instruments

LAST NAME _____ FIRST NAME _____ MI _____ ID [ ][ ][ ][ ] (1–4) CARD [4] (5)

NYC Board of Education
D.E. P. & S
Project CATCH
D. Perlmutter, Coord.

SCHOOL ATTENDING _____ DOB _____

HOME ADDRESS _____ IS/JHS _____

OFFICIAL CLASS [ ][ ][ ][ ][ ] (6–10) or DISCHARGE _____ REASON [ ][ ] (11–12)

NEW SCHOOL _____ [ ] (13) [ ][ ][ ] (14–16)

DAYS ABSENT [ ][ ] (17–18) DAYS LATE [ ][ ] (19–20) NEW OFF. CL. [ ][ ][ ][ ][ ] (21–25)

NEW ADDRESS [ ] (26) _____ House _____ Street _____ Boro _____ Zip

*LIST BELOW ALL SUBJECTS TAKEN EXCEPT PHYSICAL EDUCATION. DO LIST HYGIENE OR HEALTH EDUCATION. LIST ALL PARTS OF SUBJECT NAME.

SUBJECT TAKEN	GRADE	CODE
_____	[ ][ ] (27–28)	[ ][ ][ ][ ] (29–32)
_____	[ ][ ] (33)	[ ][ ][ ][ ] (38)
_____	[ ][ ] (34)	[ ][ ][ ][ ] (44)
_____	[ ][ ] (45)	[ ][ ][ ][ ] (50)
_____	[ ][ ] (51)	[ ][ ][ ][ ] (56)
_____	[ ][ ] (57)	[ ][ ][ ][ ] (62)
_____	[ ][ ] (63)	[ ][ ][ ][ ] (68)
_____	[ ][ ] (69)	[ ][ ][ ][ ] (74)

OF SUBJECTS TAKEN [ ] (75) # OF SUBJECTS PASSED [ ] (76) ENROLLED IN SIP [ ] (77)

ENROLLED IN ASCP [ ] (78) ENROLLED IN REM READING [ ] (79) ENROLLED IN ACAD MATH [ ] (80)

High School Data Collection Instrument

High School Data Collection II

Last Name _____ First _____ M.

Address _____

_____

Date of Birth _____

Official Class _____ _____

^ ^ ^ ^ ^ ^ ^

If CHANGE OF ADDRESS, please complete:

Address _____

Boro or City _____

State/Zip _____

^ ^ ^ ^ ^ ^ ^

If DISCHARGED, please complete:

Reason for discharge _____

_____

School or institution discharged to: _____

Date of Disch. _____

Office Use Only

_____

IDB

NYC Board of Education
DEP & S CCOE
Project CATCH
D. Perlmutter, Coordinator

SPRING '77

Subject Taken	Grade

No. Days ABSENT Spring '77 ____

No. Days LATE Spring '77 ____

____ Enrolled in After School Occupational Skills Program?

____ Enrolled in Shared Instruction Program?

Office Use Only

Subjects Taken ____

Subjects Passed ____

GPA ____

FALL '77

Subject Taken	Grade

No. Days ABSENT Fall '77 ____

No. Days LATE Fall '77 ____

____ Enrolled in After School Occupational Skills Program?

____ Enrolled in Shared Instruction Program?

Office Use Only

Subjects Taken ____

Subjects Passed ____

GPA ____

SPRING '78

Subject Taken	Grade

No. Days ABSENT Spring '78 ____

No. Days LATE Spring '78 ____

____ Enrolled in After School Occupational Skills Progr

____ Enrolled in Shared Instruction Program?

Office Use Only

Subjects Taken ____

Subjects Passed ____

GPA ____

H. S. Data Collection III

Spring 79

Last _____ First _____ M I _____ DOB _____

Address _____ Boro _____ Zip _____ Telephone _____

IF CHANGE OF ADDRESS, PLEASE COMPLETE:

New Address _____ Boro _____ Zip _____ Telephone _____

* * *

School Attending _____ Last OFF. _____ New OFF. _____

IF DISCHARGED, PLEASE COMPLETE:

Date of Discharge _____ Reason _____

* * *

__ __ ID __ __ B __ DMG __ __ TAV # __ __ __ ABS __ LATE __

Subjects (Do Not Abbreviate)	Marks	Subjects (Do Not Abbreviate)	Marks

NYC Board of Education
DEP&S CCOE
Project CATCH
D. Perlmutter, Coordinator

occup program

Appendix F
Letters of Cooperation from the
Executive Director of the High Schools

BOARD OF EDUCATION OF THE CITY OF NEW YORK
110 LIVINGSTON STREET, BROOKLYN, N. Y. 11201
HIGH SCHOOL DIVISION

SAMUEL POLATNICK
EXECUTIVE DIRECTOR

TELEPHONE 596-8102

January 20, 1977

To All High School Principals:

This letter will serve to introduce Mrs. Deborah E. Perlmutter, Project Coordinator, of Project CATCH. The success of this project will require your cooperation in permitting the final phase of data collection for the students selected for the study.

Project CATCH--Career Training Choice is a VEA funded research program designed to study the long-range effects on students of choices they made at the IS/JHS level.

Students, throughout the city, have been selected as subjects in this study based on their high school applications. One third of the subjects applied for Vocational High School and were denied admission; one third were accepted into and are attending a Vocational High School; and one third went into their zoned schools without applying to a Vocational High School.

All of these subjects, while still students in IS/JHS, were surveyed as to their perceptions of the High School Application process and their plans for the future. Data on their IS/JHS performance has been collected from those school records.

The study will require the collection of information related to the subjects' high school performance as measured by grades and attendance.

We have been assured that the project is sufficiently staffed to preclude any imposition on school personnel.

We urge your cooperation in this project which will enable us to establish a firm data base for future plans to meet the needs of more of our students.

Very truly yours,

Samuel Polatnick
Executive Director

SP:es

D OF EDUCATION OF THE CITY OF NEW YORK
110 LIVINGSTON STREET, BROOKLYN, N. Y. 11201
DIVISION OF HIGH SCHOOLS

NATHAN QUINONES
EXECUTIVE DIRECTOR

TELEPHONE 596-6102

September 15, 1978

To All High School Principals:

Project CATCH--Career Training Choice--is a VEA funded research program, designed to study the long-range effects on students of choices they made at the IS/JHS level.

Students throughout the city were selected as subjects in this study based on their high school applications. One third of the subjects applied for Vocational High School and were denied admission; one third were accepted into and are attending a Vocational High School; and one third went into their zoned schools without applying to a Vocational High School.

Data on the subjects' perceptions of the high school application process, their IS/JHS performance, and their first term of high school performance have been collected and analyzed. Statistically significant results, reported upon at meetings of principals, counselors, and other professional personnel, have already resulted in improved application and counseling procedures.

This letter will serve to introduce Mrs. Deborah E. Perlmutter, Project Coordinator, of Project CATCH. The success of this project will require your cooperation in permitting the final phase of data collection for the students selected for the study.

The study requires the continued collection of information related to the subjects' high school performance as measured by grades and attendance. Student identity will continue to be protected throughout all phases of the study.

We urge your cooperation in this project which will enable us to establish a firm data base for future plans to meet the needs of more of our students.

Very truly yours,

Nathan Quinones
Executive Director

mb

APPENDIX G

Career Choice Survey

System-Wide Tests of Occupational Programs
Center for Career and Occupational Education
Board of Education of the City of New York
131 Livingston Street - Room 512
Brooklyn, NY 11201

June 5, 1979

Dear Student or Former Student:

STOP! You have been selected to participate in a special survey to help us plan occupational training programs for future students.

You can help us by completing the attached career choice questionnaire. There are two parts. Part I asks about your job training experiences and some plans. Part II asks you to respond to some ideas about career choice in general. Of course, all answers are confidential.

You are our most important source of information. Please give future students the benefit of your experience by completing the enclosed questionnaire and returning it in the stamped envelope provided.

Thank you for your cooperation.

Yours truly,

Deborah E. Perlmutter

Deborah E. Perlmutter, Coordinator
Project STOP

P.S. Any questions? Call Mrs. Perlmutter at 858-6940.

System-Wide Tests of Occupational Programs
Center for Career and Occupational Education
Board of Education of the City of New York
131 Livingston Street - Room 512
Brooklyn, NY 11201 Telephone# 858-6940

July 9, 1979

Dear Student or Former Student:

STOP - Please don't throw this away!

Early in June, you were sent a questionnaire concerning your occupational training and career choice. We need your questionnaire to complete the study.

Enclosed is a second copy of the questionnaire. Please fill it out and return it to us in the pre-addressed envelope.

The information which is being gathered is strictly confidential.

Please help us improve programs for future students - perhaps for younger people you know.

MAKE YOUR OPINION COUNT. LET US COUNT IT!

Yours truly,

Deborah E. Perlmutter

Deborah E. Perlmutter
Project STOP

DEP:bj
Enclosure

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Board of Education of the City of New York
Center for Career and Occupational Education
Project STOP
Career Choice Survey

Part I

CHECK THE CORRECT ANSWER

1. Since you have been in high school, have you taken any course offering JOB TRAINING AFTER SCHOOL OR ON THE WEEKENDS.

   1) ____ yes, in a free program: FILL IN SCHOOL NAME_____

   2) ____ yes, in a private trade school: FILL IN SCHOOL NAME_____

   3) ____ no, (IF NO, SKIP TO QUESTION 3)

2. Listed below are 5 major job areas, with examples in each. IF YOU TOOK A JOB TRAINING COURSE AFTER SCHOOL OR ON THE WEEKENDS, WHILE YOU WERE GOING TO HIGH SCHOOL, check the area that comes closest.

   1) ____ CLERICAL OR BUSINESS (typing, filing, selling, data processing, etc.)

   2) ____ MECHANICS OR CONSTRUCTION (auto repair, printing, carpentry, etc.)

   3) ____ SERVICES TO PEOPLE (child care, food preparation, cosmetology, etc.)

   4) ____ AGRIUCLTURE (plant or animal care)

   5) ____ ARTS (music, acting, photography, etc.)

3. Which of the following best matches your plans for finishing high school? (CHECK ONE)

   1) ____ Graduate from high school with a regular diploma

   2) ____ Get a high school equivalency diploma

   3) ____ Go to work and finish school at the same time

   4) ____ Go to work and forget about school

   5) ____ I have already graduated

   6) ____ Other: FILL IN_____

4. At this point, what do you plan to do after you finish high school? (CHECK ONE)

   1) ____ Go to a four year college

   2) ____ Go to a two year college

   3) ____ Go to a technical or trade school

   4) ____ Go directly to work full-time

   5) ____ Go to school and work

   6) ____ Undecided

Part 2

DIRECTIONS: Here are a number of statements about career choice. Read each statement and mark your answer right next to it. If you agree or mostly agree with the statement, circle (T) for True. If you disagree or mostly disagree with the statement, circle (F) for False.

Sample: I am answering a questionnaire. (T) F
The answer to the sample is True. The letter (T) is circled.

Please be sure to answer each statement. If you are not sure make your best guess

1 Once you choose a job, you can't choose another one. T F

2 In order to choose a job, you need to know what kind of person you are. T F

3 I plan to follow the line of work my parents suggest. T F

4 I guess everybody has to go to work sooner or later, but I don't look forward to it. T

5 A person can do any kind of work he wants as long as he tries hard. T F

6 I'm not going to worry about choosing an occupation until I'm out of school. T F

7 Your job is important because it determines how much you can earn. T F

8 Work is worthwhile mainly because it lets you buy the things you want. T F

9 The greatest appeal of a job to me is the opportunity it provides for getting ahead. T F

10 I often daydream about what I want to be, but I really haven't chosen a line of work yet. T F

11 Knowing what you are good at is more important than knowing what you like in choosing an occupation. T F

12 Your parents probably know better than anybody else which occupation you should enter. T F

13 If I can just help others in my work, I'll be happy. T F

14 Work is dull and unpleasant. T F

15 Everyone seems to tell me something different; as a result I don't know which kind of work to choose. T F

16 I don't know how to go about getting into the kind of work I want to do. T F

17 There is no point deciding on a job when the future is so uncertain. T F

18 I spend a lot of time wishing I could do work I know I can never do. T F

19 I don't know what courses I should take in school. T F

20 It's probably just as easy to be successful in one occupation as it is in another. T F

21 By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter. T F

22 There are so many things to consider in choosing an occupation, it is hard to make a decision. T F

23 I seldom think about the job I want to enter. T F

24 It doesn't matter which job you choose as long as it pays well. T F

25 You can't go very far wrong by following your parents' advice about which job to choose. T F

26 Working is much like going to school. T F

27 I am having difficulty in preparing myself for the work I want to do. T F

28 I know very little about the requirements of jobs. T F

29 The job I choose has to give me plenty of freedom to do what I want. T F

30 The best thing to do is to try out several jobs, and then choose the one you like best. T F

31 There is only one occupation for each person.

32 Whether you are interested in a particular kind of work is not as important as whether you can do it. T F

33 I can't understand how some people can be so certain about what they want to do. T F

34 As long as I can remember, I've known what kind of work I want to do. T F

35 I want to really accomplish something in my work - to make a great discovery or earn a lot of money or help a great number of people. T F

36 You get into an occupation mostly by chance. T F

37 It's who you know, not what you know, that's important in a job. T F

38 When it comes to choosing a job, I'll make up my own mind. T F

39 You should choose an occupation which gives you a chance to help others. T F

40 When I am trying to study, I often find myself daydreaming about what it will be like when I start working. T F

41 I have little or no idea of what working will be like. T F

42 You should choose an occupation, then plan how to enter it. T F

43 I really can't find any work that has much appeal to me. T F

44 You should choose a job in which you can someday become famous. T F

45 If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions. T F

46 You should choose a job which allows you to do what you believe in. T F

47 The most important part of work is the pleasure which comes from doing it. T F

48 I keep changing my occupational choice. T F

49 As far as choosing an occupation is concerned, something will come along sooner or later. T F

50 I am not going to worry about choosing a job since you don't have anything to say about it anyway. T F

THANK YOU FOR COMPLETING THIS SURVEY.
PLEASE MAIL IT BACK TODAY.

Project STOP
Center for Career and Occupational Education
New York City Board of Education

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APPENDIX H

Job Training Survey

System-Wide Tests of Occupational Programs
Center for Career and Occupational Education
Board of Education of the City of New York
131 Livingston Street - Room 512
Brooklyn, NY 11201

June 5, 1979

Dear Student or Former Student:

STOP! You have been selected to participate in a special survey to help us plan occupational training programs for future students.

You can help us by answering a few questions about your job training and work experience in the last couple of years, of course, the information you share with us will be confidential.

You are our most important source of information. Please give future students the benefit of your experience by completing the enclosed questionnaire and returning it in the stamped envelope provided.

Thank you for your cooperation.

Yours truly,

Deborah E. Perlmutter

Deborah E. Perlmutter, Coordinator
Project STOP

P.S. Any questions? Call Mrs. Perlmutter at 858-6940.

System-Wide Tests of Occupational Programs
Center for Career and Occupational Education
Board of Education of the City of New York
131 Livingston Street - Room 512
Brooklyn, NY 11201 Telephone# 858-6940

July 9, 1979

Dear Student or Former Student:

STOP - Please don't throw this away!

Early in June, you were sent a questionnaire concerning your occupational training and career choice. We need <u>your</u> questionnaire to complete the study.

Enclosed is a second copy of the questionnaire. Please fill it out and return it to us in the pre-addressed envelope.

The information which is being gathered is strictly confidential.

Please help us improve programs for future students - perhaps for younger people you know.

MAKE YOUR OPINION COUNT. LET US COUNT IT!

Yours truly,

Deborah E. Perlmutter

Deborah E. Perlmutter
Project STOP

DEP:bj
Enclosure

Board of Education of the City of New York
Center for Career and Occupational Education
Project STOP
Job Training Survey

1. Check the last term you attended a "regular" academic or vocational New York City high school.

___ Fall 1976 ___ Spring 1977 ___ Fall 1977

___ Spring 1978 ___ Fall 1978 ___ Spring 1979 (This term)

2. Fill in the name of the last "regular" New York City high school you attended:

_____

3. While you were attending this high school, did you take any courses offering JOB TRAINING AFTER SCHOOL OR ON THE WEEKENDS?

1) ___ yes, in a free program: FILL IN SCHOOL NAME_____

2) ___ yes, in a private trade school: FILL IN SCHOOL NAME_____

3) ___ no, (IF NO, SKIP TO QUESTION 5.

4. Listed below are 5 major job areas, with examples in each. IF YOU TOOK A JOB TRAINING COURSE AFTER SCHOOL OR ON THE WEEKENDS, WHILE YOU WERE GOING TO HIGH SCHOOL, check the area that comes closest.

1)___ CLERICAL OR BUSINESS (typing, filing, selling, data processing, etc.)

2)___ MECHANICS OR CONSTRUCTION (auto repair, printing, carpentry, etc.)

3)___ SERVICES TO PEOPLE (child care, food preparation, cosmetology, etc.)

4)___ AGRICULTURE (plant or animal care)

5)___ ARTS (music, acting, photography, etc.)

5. AFTER you left that New York City High School, did you take any courses offering job training?

___ yes, in a free program: FILL IN SCHOOL NAME_____

___ yes, in a private trade school: FILL IN SCHOOL NAME_____

___ no (IF NO, SKIP TO QUESTION 7)

6. Listed below are 5 major job areas, with examples in each. If you took a JOB TRAINING COURSE AFTER LEAVING HIGH SCHOOL, check the area that comes closest.

1) ___ CLERICAL OR BUSINESS (typing, filing, selling, data processing, etc.)

2) ___ MECHANICS OR CONSTRUCTION (auto repair, printing, carpentry, etc.)

3) ___ SERVICES TO PEOPLE (child care, food preparation, cosmetology, etc.)

4) ___ AGRICULTURE (plant or animal care)

5) ___ ARTS (music, acting, photography, etc.)

7. Since you left that New York City High School, have you worked?

____ yes, I'm working now

____ yes, but I'm not working now.

____ no (IF NO, SKIP TO QUESTION 9)

8. Listed below are 5 major job areas. You will see examples in each. IF YOU HAVE WORKED SINCE LEAVING HIGH SCHOOL, check the job area that comes closest.

1) ____CLERICAL OR BUSINESS (typing, filing, selling, data processing, etc.)

2) ____MECHANICS OR CONSTRUCTION (auto repair, printing, carpentry, etc.)

3) ____SERVICES TO PEOPLE (child care, food preparation, cosmetology, etc.)

4) ____AGRICULTURE (plant or animal care)

5) ____ARTS (music, acting, photography, etc.)

9. Check the activity (or activities) that comes closest to what you are now doing.

1) ____Going to an alternative or private high school in New York City: FILL IN SCHOOL NAME_____

2) ____Going to a high school outside of New York City: FILL IN SCHOOL NAME _____

3) ____Preparing for the High School Equivalency Test

4) ____Going to a trade school: FILL IN SCHOOL NAME_____

5) ____Working

6) ____Looking for a job

7) ____Other: PLEASE EXPLAIN_____

10. Would you like to receive job training at this point in your life?

____ yes

____ no (IF NO, SKIP QUESTION 11)

11. Listed below are 5 major job areas. You will see examples in each. Although you may not see the exact job you would like, check the kind of training that comes closest to your choice.

1)____CLERICAL OR BUSINESS (typing, filing, selling, data processing, etc.)

2)____MECHANICS OR CONSTRUCTION (auto repair, printing, carpentry, etc.)

3)____SERVICES TO PEOPLE (child care, food preparation, cosmetology, etc.)

4)____AGRICULTURE (plant or animal care)

5)____ARTS (music, acting, photography, etc.)

THANK YOU FOR COMPLETING THIS SURVEY.
PLEASE MAIL IT BACK TODAY.

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